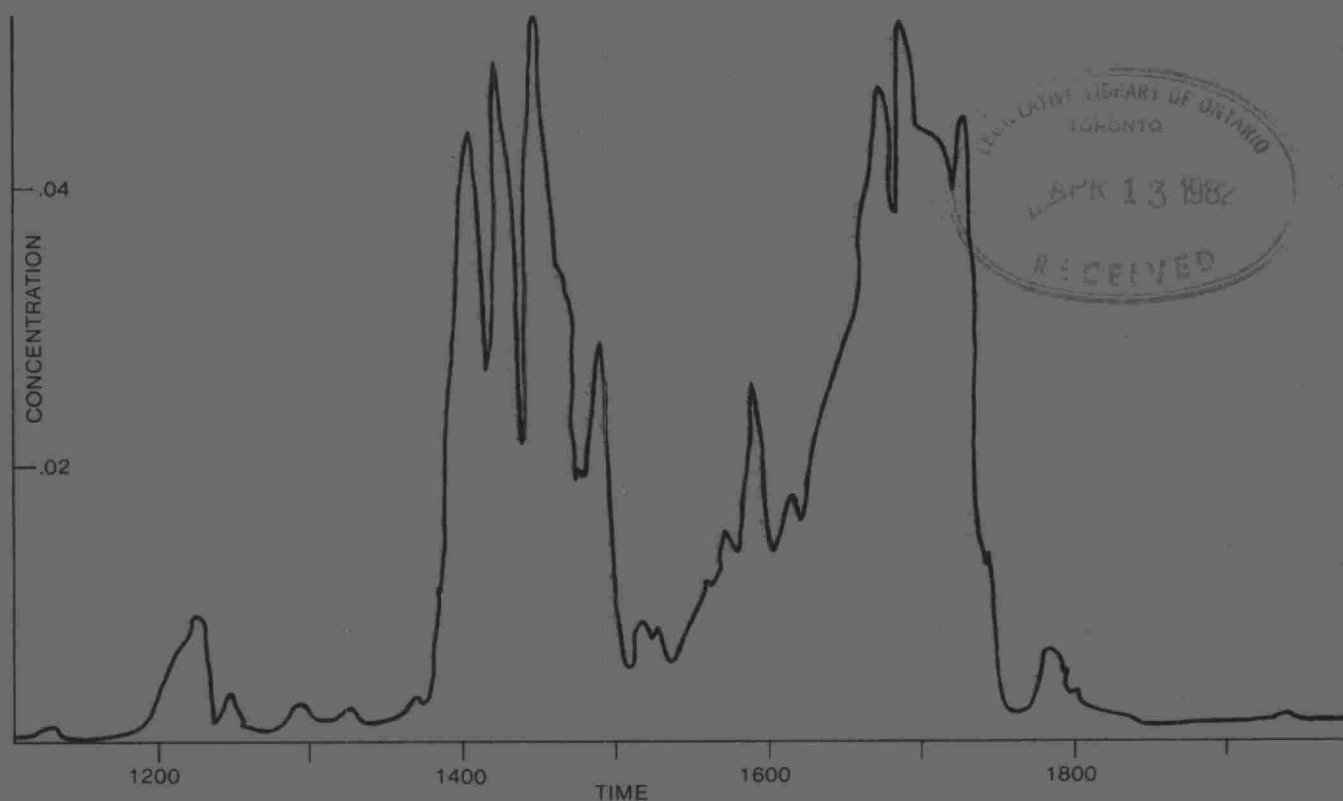


CAZON
EV 665
A35
v.1

AIR QUALITY MONITORING REPORTS 1980

Volume 1

Report No. ARB-37-81 AQM



Ministry
of the
Environment

Hon. Keith C. Norton, Q.C.,
Minister

Gérard J. M. Raymond
Deputy Minister

Copyright Provisions and Restrictions on Copying:

This Ontario Ministry of the Environment work is protected by Crown copyright (unless otherwise indicated), which is held by the Queen's Printer for Ontario. It may be reproduced for non-commercial purposes if credit is given and Crown copyright is acknowledged.

It may not be reproduced, in all or in part, for any commercial purpose except under a licence from the Queen's Printer for Ontario.

For information on reproducing Government of Ontario works, please contact ServiceOntario Publications at copyright@ontario.ca

Introduction

This report, Volume 1, contains a summary of 1980 air quality data obtained by continuous monitoring instruments operated by the Ministry of the Environment at 106 locations across Ontario including a 6-site network run as part of the Nanticoke Environmental Monitoring Program (NEMP) survey. In addition, a summary of sulphur dioxide data from 53 stations operated by Ontario Hydro in the vicinity of their fossil-fuel power generating stations has been included.

As in previous years, the summaries of hourly data are given in the remaining four volumes of this report: Volume 2, sulphur dioxide data from 80 stations; Volume 3, soiling index data from 63 stations; Volume 4, carbon monoxide, hydrocarbons (total and reactive), ozone, and total reduced sulphur from 24, 26, 33 and 16 stations respectively; Volume 5, the oxides of nitrogen NO, NO₂, and NO_x from 30, 27, and 30 stations respectively.

Sampling Stations

Table 1 lists the stations in the Ontario monitoring network with continuous sampling instruments. The first seven columns give the region in which the monitor is located, the station identification number and address, its bearing on the Universal Transverse Mercator (UTM) Grid, the height of the station above mean sea level, and the height of the air intake above ground. The last seven columns indicate which pollutants, total reduced sulphur (TRS), sulphur dioxide (SO₂), soiling index (COH), ozone (O₃), carbon monoxide (CO), hydrocarbons — total or reactive — (HC), nitrogen dioxide (NO₂), nitric oxide (NO), and nitrogen oxides (NO_x), are being monitored at that station.

The largest number of stations in a region is 28 in the Central Region. The most monitoring instruments (116) are also found in the Central Region. Figure 1 shows the general location of the sampling stations across Ontario as well as the number in each region and city. Figures 2, 3, 4, and 5 show the locations of the sampling stations in Toronto, Hamilton, the Sudbury area, and Windsor respectively.

Data from the Nanticoke Environmental Monitoring Program (NEMP) survey are provided by the NEMP project team of the Special Studies Unit of the Atmospheric Research and Special Projects Section of the Air Resources Branch who are responsible for the data acquisition, validation, and processing of data for this report.

The sulphur dioxide data from the Ontario Hydro monitoring program around each generating station are provided by the Environmental Protection Department, Central Thermal Services, Thermal Generating Division, who are responsible for the acquisition, validation and processing of data used in this report.

Criteria for Desirable Ambient Air Quality

Table 2 outlines the Criteria for Desirable Air Quality in Ontario for those contaminants reported in this report.

The criteria are given in units of parts per million by volume and micrograms per cubic meter of air for the sampling time appropriate for each criterion; 1 hour, 8 hours, 24 hours, or 1 year. The unit for soiling index, a measure of suspended particulate matter, is Coefficient of Haze (COH) per 1000 feet of air sampled.

These criteria serve as a convenient yardstick by which the Province may estimate its success in achieving goals for desirable ambient air quality.

1980 Measurements

Acquisition and processing of air quality data in Ontario is the responsibility of the Air Quality and Meteorology Section of the Air Resources Branch. The instrumentation, however, has been installed and maintained by the Technical Support Group in each of the six regional offices since the Ministry decentralized many of its operations in 1974.

Data are acquired in two ways. Data from stations in major population centres and those areas which have a publicized Air Pollution Index are telemetered in real-time to the central data-acquisition facility in Toronto where they are digitized, stored on magnetic tape, and then computer-processed. All other data are recorded locally on analogue charts which are later read and digitized by the Air Quality Unit, Air Resources Branch in Toronto and then processed by computer in the same way as the telemetered data.

In this Volume, the annual summary of hourly readings for each station and contaminant is reported in a single line giving the number of days on which valid data were monitored (a minimum of 16 hours of data are required for a valid day), the percentile distribution, the arithmetic mean, the maximum 1-hour and 24-hour readings, and, where appropriate, the number of times the air quality criteria were exceeded. The concentrations measured for each hour of instrument operation are given in Volumes 2 – 5 of this report.

Only those stations reporting more than 274 days of valid data in 1980 are considered to have an adequate sample to determine a representative annual mean. For those stations with fewer than 275 valid days, the reported arithmetic mean cannot be considered as representative for the comparison with the annual mean criterion for sulphur dioxide or soiling index. Such stations are indicated with INS under the 1-Year Criterion heading.

Analyses of Data

Sulphur Dioxide (see tables 3A and 3B)

Inventoried emissions of sulphur dioxide in 1980 were approximately 1.69 million tonnes, of which 1.07 million tonnes were emitted in the primary smelting of nickel, copper and iron in the Sudbury and Wawa areas. Thermal generating stations are the largest sources of SO₂ in southern Ontario accounting for 0.40 million tonnes annually. The remaining 0.22 million tonnes are emitted by commercial, and residential fuel users as well as refineries, coke ovens, and other industrial operations. It should be noted, however, that community air quality is, on the long term, affected more by small, nearby sources than by large and distant sources emitting from tall stacks.

Of the 80 stations in the Ontario network, only one recorded an annual mean above the 1-Year criterion of 0.02 ppm: Holy Trinity Church, Norton/Portage, Chippawa - 0.030 ppm. This site is located near an industrial source of SO₂. (Two other sites had an average in excess of 0.02 ppm but did not obtain a sample sufficiently large to determine a representative annual mean - General Hospital, 342 McGill, Hawkesbury and Niagara Falls Rd./Ontario St., Thorold. Both these sites monitor industrial sources.)

Most of those stations which exceeded the 1-hour or 24-hour criterion on more than one occasion were located near major sulphur dioxide sources. The station with the highest 24-hour average (0.44 ppm) was Holy Trinity Church, Norton/Portage, Chippawa. The maximum 1-hour average was recorded at Sir James Dunn Public School, Wawa - 1.96 ppm.

Thirty-two stations reported exceedences of the 1-hour criterion of 0.25 ppm. The most exceedences (160) were reported at Happy Valley, Falconbridge. Fourteen stations exceeded the 24-hour criterion of 0.10 ppm with the Niagara Falls Rd./Ontario St., Thorold station recording the most - 13.

The 53 stations in the Ontario Hydro monitoring network are located near fossil-fueled power generating stations. For these stations (Table 3B), the number of hours of valid data are reported instead of the number of valid days. For the arithmetic mean to be compared with the annual SO₂ criterion, 6589 hours of valid data must have been collected. No Hydro monitoring station exceeded the annual criterion. Only one station exceeded the 24-hour average criterion. The 1-hour criterion was exceeded at 8 locations with the maximum number occurring at the station 7km west of the Lakeview Generating Station in Mississauga - 12 times.

Suspended Particulate Matter Soiling Index (see Tables 4 and 5)

Traditionally, the public has identified air pollution with black or dark smoke. Improved combustion technology and an increase in the use of fuels other than coal has eliminated black smoke as a major pollutant. Fine particles of smoke from combustion and dust from construction, grinding processes, and transportation constitute what is termed "suspended particulate matter". The soiling properties of suspended particulate matter deposited upon a filter are measured by the reduction of light transmitted through the soiled filter and is related to the quantity, the opacity and darkness of the deposit. The evaluation is carried out on 1-hour or 2-hour samples and is known as the soiling index. The unit of measure for soiling index is the Coefficient of Haze (COH) per 1000 feet of air sampled.

The annual average criterion of 0.5 COH/1000ft. was surpassed at three locations; two in Hamilton and one in Toronto. The maximum annual average was recorded at North Park, Hamilton: 0.72 COH/1000ft. The 24-hour criterion of 1.0 COH/1000 ft. was exceeded at thirteen stations, but only five did so more than ten times: North Park, Hamilton (81) Bathurst-Wilson, North York (21), Barton-Wentworth, Hamilton (20), Burlington-Leeds, Hamilton (14), and Sherbourne/Wilton, Toronto (14).

The maximum 24-hour measurement was 2.0 COH/1000 ft. at Burlington/Wellington, Hamilton.

Carbon Monoxide (see Table 6)

In terms of total weight and concentration, carbon monoxide leads all other contaminants in city air. Mobile sources, trucks and automobiles, are almost exclusively responsible. Although pollution control equipment has reduced the output per car, the increase in the number of vehicles on many streets has limited the overall reduction.

The highest levels of carbon monoxide were measured at 381 Yonge St. in Toronto. This station, located close to a major traffic artery and within the urban street canyon, measured an annual average of 4.2 ppm, a maximum 8-hour average of 26 ppm, and a 1-hour maximum of 38 ppm. The 8-hour criterion of 13 ppm was exceeded 39 times at this station and the 1-hour criterion of 30 ppm, 20 times. No other station exceeded either criterion.

Hydrocarbons (see Tables 7 and 8)

Hydrocarbons are emitted naturally from trees and other vegetation and in the decay processes of animal and plant material. They are also emitted by vehicles, gasoline storage tanks, and industrial sources such as the petroleum and chemical industries. The non-methane fraction of the total hydrocarbons in the atmosphere are of special interest because they react with nitrogen oxides in the atmosphere in the presence of sufficient sunlight to form ozone and other oxidant chemical species common in the Los Angeles-type smog.

Two types of measurements are made of hydrocarbons in Ontario. The first type uses flame ionization techniques to measure all hydrocarbons and is reported as total hydrocarbons. Methane, however, does not participate in the number of photochemical reactions which form oxidants. Thus, techniques have been developed to remove the methane fraction from the total hydrocarbon measurement. These non-methane hydrocarbons have been termed reactive hydrocarbons.

No criteria have been set for either total or reactive hydrocarbons in Ontario. The highest annual mean level measured in the total hydrocarbon monitoring network was 2.41 ppm at King-Rectory in London. The maximum annual mean concentration for reactive hydrocarbons was 0.66 ppm at Nanticoke Rd./Walpole Conc. 5, Nanticoke.

Ozone (see Table 9)

Ozone is a naturally occurring constituent of the upper atmosphere. In the lower atmosphere, however, it is a secondary product of photochemical reactions among reactive hydrocarbons and nitrogen oxides. In the upper atmosphere ozone plays an important role in the maintenance of life on the ground by absorbing harmful ultra-violet radiation. In the lower atmosphere, however, ozone is detrimental to the health of man and plants as well as enhancing damage to various materials.

Since time is needed for the afore-mentioned photochemical reactions to be completed, ozone is often found some distances from the source of its pollutant precursors. Thus, high concentrations of ozone which occur at rural

locations such as Simcoe and Orono are not indicative of natural or local sources but the transport and reaction in the presence of adequate sunlight of the ozone precursors from upwind urban sources 100-1000 kilometres distant.

The highest annual average ozone concentrations were again measured at rural locations in Ontario: Long Point Provincial Park (0.033 ppm), Simcoe (0.026 ppm) and Orono (0.026 ppm). Because ozone formation is greatest during the spring and summer months when sunlight is strongest and temperatures highest, annual averages have little meaning. The number of hours with O₃ in excess of the Ontario criterion of 0.080 ppm is a better indicator of potential damage to plant life and health. The most hours above 0.080 ppm were measured at Long Point Provincial Park (225) and 467 University Ave. W., Windsor (149). The number of high ozone concentrations was again lower than in previous years. Two stations did not record an hour above 0.080 ppm and five did so less than 25 times. (Only stations with a large enough record were included in this analysis).

The maximum 1-hour average was measured at Centennial Park, Sarnia: 0.155 ppm. The maximum 24-hour O₃ average was measured at Long Point Provincial Park (0.091 ppm).

Total Reduced Sulphur (see Table 10)

The first extensive monitoring of total reduced sulphur began in Ontario in 1976. Most of the total reduced sulphur may be found in the form of hydrogen sulphide. In the vicinity of pulp and paper mills and refineries, significant concentrations of mercaptans and other reduced sulphurs may be present, however.

Maximum concentrations of total reduced sulphur occurred at Holy Trinity Church, Norton/Portage, Chippawa for the annual mean (11.5 ppb) and the maximum 24-hour concentration (102 ppb). The maximum 1-hour average concentration was 490 ppb at Portage/Church St., Fort Frances. Six of the fourteen stations had hourly values which exceeded 100 ppb. No criteria have yet been set for total reduced sulphur although a provisional guideline of 27 ppb for a one-hour average has been proposed in the vicinity of kraft paper mills. Five stations recorded at least one hour above this guideline.

Oxides of Nitrogen (see Tables 11, 12 and 13)

The oxides of nitrogen (NO and NO₂) are generated by natural as well as anthropogenic sources. Nitrogen and oxygen, which are the principal constituents of the atmosphere, combine during high temperature combustion to form nitrogen oxides (NOX). The main sources of NOX are automobile exhausts, power plants, incinerators and chemical processes.

No evidence exists that nitric oxide (NO) at the concentrations measured in the atmosphere has any direct

adverse effect on health and welfare. Oxidation of nitric oxide to nitrogen dioxide (NO₂), however, does occur under certain conditions, and nitrogen dioxide is known to affect health as well as visibility. The nitrogen oxides also play an important role in the photochemical reactions involving ozone and other oxidants.

The maximum annual mean NO₂ concentration was reported at Evans-Arnold, Etobicoke (0.036 ppm). The maximum 24-hour average was recorded at North Park, Hamilton - 0.10 ppm. The 1-hour criterion of 0.20 ppm was exceeded only once, at Lawrence/Kennedy, Scarborough (0.24 ppm).

The maximum NO annual concentration occurred at Bathurst-Wilson, North York (0.091 ppm) as did the maximum 24-hour average (0.34 ppm). The maximum 1-hour concentration (0.84 ppm) occurred at Edna/Frederick St., Kitchener.

Nitrogen oxides, essentially the sum of the NO and NO₂ concentrations, were highest at sites adjacent to high traffic-density highways. The maximum annual average (0.119 ppm) occurred at Bathurst-Wilson, North York. The maximum 1-hour concentration (0.89 ppm) was reported at Edna/Frederick St., Kitchener. The maximum 24-hour average of 0.38 ppm occurred at Bathurst-Wilson, North York.

Ontario's Air Pollution Index

An Air Pollution Index (API) based upon the 24-hour average concentration of sulphur dioxide and suspended particulate matter has been in use in Ontario since March, 1970. Air Pollution Index stations were established in Toronto and Hamilton in 1970, Sudbury, Windsor, and Happy Valley in 1971, Welland and Niagara Falls in 1974, Coniston in 1975, New Sudbury in 1976, Sarnia in 1977, and St. Catharines in 1979. The station in Happy Valley was discontinued in 1975 and the Welland station was closed in 1978. The API at all stations have a common basis; at an API of 32, the desirable air quality criteria for sulphur dioxide and soiling index on a 24-hour average are exceeded. When the API exceeds 58, adverse health effects may increase in incidence, especially for the elderly and those with respiratory problems.

At an API of 32 with adverse weather conditions expected for the next 6 hours, local sources with the largest emissions are alerted and may be asked to cut-back on their operations. At an API of 50 with adverse conditions expected for 6 hours, the Minister may order curtailment of industrial operations, and a shut-down may be ordered by the Minister if the Index exceeds 100 under continuing adverse weather.

No station exceeded an API of 50 during 1980. Only Hamilton (4 times) and Sarnia (1 time) reached the advisory level of 32.

The history of the Index stations, the maximum level and the number of times the Index equalled or exceeded 32 and 50 for the years 1970 to 1980 are given in Table 14.

Table 1/1980 Stations with Continuous Sampling Instrumentation
(Pollutant data abstracted hourly or two-hourly)

REGION	STATION NUMBER	NAME OF STATION	UTM GRID EAST NORTH		SITE ELE- VATION ABOVE MEAN SEA LEVEL (METRES)	AIR INTAKE ABOVE GROUND (METRES)	POLLUTANT MONITORED								
							TRS	SO ₂	COH	O ₃	CO	HC	NO ₂	NO	NOX
SOUTH WEST	10001	College of Agric. Tech., Huron Park	04600	47931	243	5				x					
	12008	467 University Ave. W. Windsor	03316	46867	183	11		x	x	x	x	x	x	x	x
	12013	3665 Wyandotte St. Windsor	03358	46874	183	6		x							
	12016	College-South St. Windsor	03290	46841	183	4		x	x						
	12032	Morton Dock Windsor	03271	46817	177	4		x							
	13021	MOE Pump. Stn. Middle Road Merlin	03991	46776	190	3				x					
	14004	Hydro SS Concession 14/15 Courtright	03808	47343	183	3		x							
	14016	Lambton G.S. Hwy. 40 Courtright	03793	47397	180	4		x							
	14049	156 Victoria St. Sarnia	03854	47584	183	4		x							
	14062	242 Indian Rd. S., Sarnia	03878	47578	183	4	x	x							
	14064	Centennial Park Front St/CN Tracks Sarnia	03854	47592	182	3		x	x	x	x	x	x	x	x
	14118	PUC Water Pump Stn Hwy. 21 Petrolia	04027	47564	206	4				x					
	14902	286 Paget Corunna	03822	47496	159	3		x		x		x	x	x	x
	14903	Virgil LaSalle Froomfield Corunna	03814	47520	193	3				x		x	x	x	x
	15001	King-Rectory London	04818	47595	259	4		x	x	x	x	x	x	x	x
	15003	362 Dundas St. London	04801	47590	251	17			x						
	18007	Concession Rd. 2 Lot A Tiverton	04541	49053	192	4	x	x		x					
WEST CENTRAL	21006	Post Office Brantford	05597	47763	221	16		x	x						
	22071	Experimental Farm Simcoe	05597	47449	236	4		x	x	x			x	x	x
	22086	Cheapside Rd. 3 Km S of Hwy 3 Nanticoke	05821	47472	206	5		x	x				x	x	x
	26001	Public Utilities Substation, 65 Weber St. S. Waterloo	05397	48128	336	2			x						
	26029	Edna/Frederick St. Kitchener	05427	48116	325	5		x	x	x	x		x	x	x
	27037	North/Geneva St. St. Catharines	06431	47805	107	5		x	x	x	x	x	x	x	x
	27042	Niagara Falls Rd./ Ontario St. Thorold	06469	47739	175	5		x							
	27043	McAdam Park Centre/Davis St. Thorold	06470	47736	175	4		x							
	27046	Public Works, 200 m S Beaverdam Rd. Thorold	06460	47742	180	5		x							
	27048	Niagara Public Works Dominion Rd. Fort Erie	06670	47500	175	2		x							

Table 1/1980 – Continued . . .

REGION	STATION NUMBER	NAME OF STATION	UTM GRID EAST	UTM GRID NORTH	SITE ELEVATION ABOVE MEAN SEA LEVEL (METRES)	AIR INTAKE ABOVE GROUND (METRES)	POLLUTANT MONITORED									
							TRS	SO ₂	COH	O ₃	CO	HC	NO ₂	NO	NOX	
WEST CENTRAL	27049	Murray/Buchanan Ave. Niagara Falls	06561	47716	195	5		x	x							
	27051	Holy Trinity Church Norton/Portage Chippawa	06580	47694	185	16	x	x	x							
	28025	Farquhar/Wyndham St. Guelph	05609	48213	320	4		x	x							
	29001	Hughson - Main Hamilton	05918	47894	99	9			x							
	29008	North Park Hamilton	05984	47927	79	3	x	x	x			x	x	x	x	
	29009	Kenilworth Hamilton	05967	47884	92	9			x							
	29011	Burlington/Leeds Hamilton	05954	47905	79	5			x							
	29012	Burlington-Wellington Hamilton	05931	47914	84	4			x							
	29015	Merrick St. Hamilton	05917	47900	92	17			x							
	29017	Chatham - Frid Hamilton	05898	47896	99	5			x							
	29025	Barton - Wentworth Hamilton	05939	47900	92	4	x	x	x	x	x		x	x	x	
	29067	450 Hughson St. Hamilton	05925	47913	84	5			x							
	CENTRAL	31001	67 College St. 5th Floor Toronto	06300	48352	104	20		x	x	x	x	x	x	x	x
		31049	Mission, 381 Yonge Street, Toronto	06304	48351	91	4					x				
31090		67 College St. 2nd Floor, Toronto	06300	48352	104	4					x					
31105		Sherbourne/Wilton Toronto	06317	48338	76	5		x	x	x	x		x	x	x	
33003		Lawrence-Kennedy Scarborough	06389	48452	168	3		x	x	x	x	x	x	x	x	
33019		Met. Branch, Scar. Bluffs, Scarborough	06422	48411	152	3		x	x							
34002		Science Centre Don Mills Rd. North York	06338	48419	107	9		x	x	x	x	x	x	x	x	
34007		Bathurst-Wilson North York	06261	48437	214	2		x	x		x	x	x	x	x	
35003		Elmcrest Rd. Etobicoke	06142	48338	152	4		x	x	x	x	x	x	x	x	
35005		Queensway Hospital Etobicoke	06149	48293	107	9		x	x							
35008		22-36th St. Etobicoke	06190	48281	92	2			x							
35033		Evans - Arnold Etobicoke	06192	48302	107	3		x	x	x	x	x	x	x	x	
35050		MOE Lab. Resources Road Etobicoke	06175	48405	152	18		x	x							
44007		2037 Pine Burlington	05975	47975	79	6		x	x							
44008		Hwy. 2/North Shore Blvd. E. Burlington	05972	47964	270	17		x	x	x						
44010		1298 Rebecca St. Oakville	06053	48078	92	5		x	x	x	x	x	x	x	x	
44015		Bronte Rd./Woburn Cres. Oakville	06053	48078	91	5	x	x	x	x	x	x	x	x	x	
45024		206 Eulalie St. Oshawa	06723	48623	101	1			x							
45025		Ritson Rd./Olive Ave. Oshawa	06724	48624	107	4		x	x	x	x		x	x	x	

Table 1/1980 – Continued . . .

REGION	STATION NUMBER	NAME OF STATION	UTM GRID EAST NORTH		SITE ELE- VATION ABOVE MEAN SEA LEVEL (METRES)	AIR INTAKE ABOVE GROUND (METRES)	POLLUTANT MONITORED								
							TRS	SO ₂	COH	O ₃	CO	HC	NO ₂	NO	NOX
CEN- TRAL	45125	Natural Res. Bldg. Orono	06907	48712	149	9				x					
	46025	Public Library Mississauga	06115	48257	137	5			x						
	46033	Fire Hall Bramalea	06053	48398	198	4			x						
	46100	Public School Green Glade Road, Mississauga	06124	48187	92	11		x	x						
	46110	Queensway West/ Hurontario St. Mississauga	06122	48249	101	5		x	x	x	x		x	x	x
	47041	Fed. Manpower Bldg. 48 Owen St. Barrie	06044	49159	236	14		x	x						
	48002	MTC Yard, Hwy. 47 Stouffville	06391	48694	259	4		x	x	x					
	58030	132 King St. Port Hope	07174	48692	82	3							x	x	x
	59006	City Hall 500 George St. Peterborough	07137	49095	198	18		x	x						
	51001	McDonald Gdns. Ottawa	04471	50312	61	4		x	x	x	x		x	x	x
	51037	Confederate Park Info Centre Bldg. Hawkesbury	05311	50511	60	11		x							
SOUTH EAST	51038	General Hospital 342 McGill Hawkesbury	05300	50535	46	15		x							
	52018	1055 Princess St. Kingston	03788	48990	82	15			x						
	52020	Churchill Park Napier St., Kingston	03795	48986	82	5		x	x						
	56051	Memorial Park Cornwall	05208	49846	61	4	x	x	x	x	x		x	x	x
	56068	435 Second St. W. Cornwall	05205	49845	66	6	x								
	61010	Lassie/Dickenson Roads Balmertown	04480	56670	381	3		x							
	61026	56 King St. Dryden	05117	55140	366	5	x								
	62030	Portage/Church Fort Frances	04708	53838	336	4	x								
NORTH WEST	62032	Cemetery, Coloni- zation Road Fort Frances	04697	53841	336	5	x								
	63022	Hospital 35 Algoma St. N. Thunder Bay	03356	53672	223	22		x	x						
	63040	435 James Street Thunder Bay	03302	53607	189	15		x	x						
	63046	Montreal St. Thunder Bay	03298	53584	191	15	x								
	71001	29 Hillcrest Ave. Wawa	06655	53186	305	4		x							
	71022	Sault College Queens Street Sault Ste. Marie	07029	51550	210	5		x							
	71049	Land Reg. Office Queen St. Sault Ste. Marie	07047	51543	183	6				x					
NORTH EAST	71057	Michipicoten Ave. Lot 38 Town of Mission	06625	53110	198	4		x		x					

Table 1/1980 – Continued...

[illegible]

Table 2/1980
Criteria for Desirable Air Quality. O. Reg. 872/74

ITEM	COLUMN 1 NAME OF CONTAMINANT	COLUMN 2 UNIT OF MEASUREMENT	COLUMN 3 AVERAGE AMOUNT CONCENTRATION OR TOTAL AMOUNT OF CONTAMINANT	COLUMN 4 PERIOD OF TIME	COLUMN 5 APPROXIMATE EQUIVALENT AT 10°C AND 760 mm Hg PRESSURE
3	Carbon Monoxide	Parts of carbon monoxide per one million parts of air by volume	30 13	1 hour 8 hours	36,200 ug/m ³ 15,700 ug/m ³
16	Nitrogen Dioxide	Parts of nitrogen dioxide per one million parts of air by volume	0.20 0.10	1 hour 24 hours	400 ug/m ³ 200 ug/m ³
18	Ozone	Parts of ozone per one million parts of air by volume	0.08	1 hour	165 ug/m ³
19	Soiling	Coefficient of Haze per 1000 feet of air	1.0 0.5	24 hours 1 year	
21	Sulphur Dioxide	Parts of sulphur dioxide per one million parts of air by volume	0.25 0.10 0.02	1 hour 24 hours 1 year	690 ug/m ³ 275 ug/m ³ 55 ug/m ³

Table 3A/1980 Summary of Data: Sulphur Dioxide (all values in p.p.m.)

Ontario Criteria – 1 Hour Average: 0.25 p.p.m.; 24-Hour Average: 0.10 p.p.m.; 1 Year Average: 0.02 p.p.m.
 INS – Indicates insufficient sample size to apply 1 Year average criterion

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERIA		
				10	30	50	70	90	99		1 HR.	24-HR.	1 HR.	24-HR.	1 YEAR
SOUTH WEST	12008	467 University Ave. W. Windsor	343	.000	.000	.002	.008	.024	.059	.011	.13	.04	NIL	NIL	NIL
	12013	3665 Wyandotte St. E. Windsor	310	.000	.000	.000	.000	.001	.018	.001	.09	.02	NIL	NIL	NIL
	12016	College/South St. Windsor	356	.000	.000	.000	.007	.023	.059	.010	.13	.04	NIL	NIL	NIL
	12032	Morton Dock Windsor	315	.000	.000	.004	.010	.024	.059	.012	.24	.08	NIL	NIL	NIL
	14004	Hydro SS Concession 14/15	351	.000	.000	.000	.000	.008	.048	.004	.23	.04	NIL	NIL	NIL
	14016	Lambton G.S. Hwy. 40	357	.000	.000	.000	.000	.013	.067	.006	.25	.07	NIL	NIL	NIL
	14049	Courtright 156 Victoria St. N. Sarnia	353	.000	.000	.000	.007	.030	.143	.014	.32	.12	4	2	NIL
	14062	242 Indian Rd. S. Sarnia	342	.000	.000	.002	.010	.027	.087	.013	.31	.07	3	NIL	NIL
	14064	Centennial Park Front St./CN Tracks Sarnia	364	.000	.000	.002	.008	.027	.124	.013	.35	.12	5	1	NIL
	14902	286 Paget St. Corunna	113	.000	.002	.007	.017	.041	.117	.020	.25	.07	NIL	NIL	INS
	15001	King/Rectory London	341	.000	.000	.000	.003	.009	.027	.005	.07	.03	NIL	NIL	NIL
	18007	Concession Rd. 2 Lot A Tiverton	293	.000	.000	.000	.000	.007	.018	.003	.08	.02	NIL	NIL	NIL
WEST CENTRAL	21006	Post Office Brantford	131	.000	.000	.000	.003	.011	.031	.005	.07	.03	NIL	NIL	INS
	22071	Experimental Farm Simcoe	325	.000	.000	.002	.006	.013	.029	.007	.09	.03	NIL	NIL	NIL
	22086	Cheapside Rd. 3 Km S of Hwy 3 Nanticoke	355	.000	.000	.000	.002	.010	.038	.005	.26	.02	1	NIL	NIL
	26029	Edna/Frederick St. Kitchener	350	.000	.000	.000	.002	.010	.035	.005	.09	.04	NIL	NIL	NIL
	27037	North/Geneva St. St. Catharines	356	.000	.000	.000	.000	.009	.034	.004	.09	.04	NIL	NIL	NIL

Table 3A/1980 – Continued . . .

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERIA		
				10	30	50	70	90	99		1 HR.	24-HR.	1 HR.	24-HR.	1 YEAR
WEST CENTRAL	27042	Niagara Falls Rd/Ontario St. Thorold	172	.000	.000	.006	.018	.053	.474	.032	1.39	.21	92	13	INS
	27043	McAdam Park Centre/Davis St. Thorold	155	.000	.000	.002	.010	.028	.164	.015	.49	.11	15	1	INS
	27046	Public Works, 200m S Beaverdam Rd. Thorold	305	.000	.000	.001	.007	.019	.074	.010	.39	.06	3	NIL	NIL
	27048	Niagara Public Works Dominion Rd. Fort Erie	287	.000	.000	.000	.005	.015	.038	.007	.09	.03	NIL	NIL	NIL
	27049	Murray/Buchanan Ave. Niagara Falls	363	.000	.000	.000	.005	.013	.038	.007	.11	.05	NIL	NIL	NIL
	27051	Holy Trinity Church Norton/Portage Chippawa	350	.000	.001	.009	.023	.081	.203	.030	.14	.44	28	10	1
	28025	Farquhar/Wyndham St. Guelph	123	.000	.000	.000	.000	.006	.026	.003	.09	.02	NIL	NIL	INS
	29008	North Park Hamilton	353	.000	.000	.002	.011	.036	.075	.014	.13	.07	NIL	NIL	NIL
	29025	Barton/Wentworth Hamilton	366	.000	.000	.004	.010	.028	.070	.013	.16	.06	NIL	NIL	NIL
CENTRAL	31001	67 College St., 5th Floor Toronto	365	.000	.000	.000	.004	.016	.050	.007	.15	.05	NIL	NIL	NIL
	31105	Sherbourne/Wilton St. Toronto	339	.000	.000	.001	.007	.018	.049	.009	.14	.06	NIL	NIL	NIL
	33003	Lawrence/Kennedy Scarborough	342	.000	.000	.000	.006	.016	.048	.008	.18	.09	NIL	NIL	NIL
	33019	Met. Branch Scarborough Bluffs Scarborough	363	.000	.000	.000	.000	.006	.024	.003	.11	.04	NIL	NIL	NIL
	34002	Science Centre Don Mills Rd. North York	349	.000	.000	.004	.008	.019	.047	.010	.14	.06	NIL	NIL	NIL
	34007	Bathurst/Wilson North York	360	.000	.000	.002	.007	.018	.049	.009	.38	.05	1	NIL	NIL
	35003	Elmcrest Rd. Etobicoke	347	.000	.000	.000	.003	.011	.038	.006	.22	.04	NIL	NIL	NIL
	35005	Queensway Hospital Etobicoke	309	.000	.000	.002	.007	.016	.037	.008	.11	.03	NIL	NIL	NIL
	35033	Evans/Arnold Ave. Etobicoke	339	.000	.000	.001	.006	.014	.035	.007	.12	.05	NIL	NIL	NIL
	35050	MOE Lab. Resources Rd. Etobicoke	329	.000	.000	.001	.006	.016	.051	.008	.22	.05	NIL	NIL	NIL
	44008	Hwy. 2/North Shore Blvd. E. Burlington	347	.000	.000	.000	.003	.009	.028	.005	.10	.05	NIL	NIL	NIL
	44010	1298 Rebecca St. Oakville	70	.000	.000	.000	.005	.015	.038	.007	.07	.03	NIL	NIL	INS
	44015	Bronte Rd./Woburn Cres. Oakville	250	.000	.000	.000	.002	.014	.067	.007	.30	.05	1	NIL	INS
	45025	Ritson Rd./Olive Ave. Oshawa	261	.000	.000	.000	.006	.015	.033	.007	.06	.03	NIL	NIL	INS
	46100	Public School Green Glade Rd. Mississauga	364	.000	.000	.002	.007	.016	.041	.009	.13	.04	NIL	NIL	NIL
	46110	Queensway W./Hurontario St. Mississauga	334	.000	.000	.000	.001	.009	.035	.005	.40	.04	1	NIL	NIL
	47041	Fed. Manpower Bldg. 48 Owen St. Barrie	254	.000	.000	.000	.000	.007	.019	.003	.08	.02	NIL	NIL	INS
	48002	MTC Yard #9 Hwy. 47 Stouffville	302	.000	.000	.000	.000	.007	.026	.003	.09	.04	NIL	NIL	NIL
	59006	City Hall 508 George St. Peterborough	340	.000	.000	.000	.000	.009	.026	.004	.08	.03	NIL	NIL	NIL
SOUTH EAST	51001	McDonald Gdns. Ottawa	326	.000	.000	.000	.000	.008	.033	.004	.09	.04	NIL	NIL	NIL

Table 3A/1980 – Continued . . .

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERIA		
				10	30	50	70	90	99		1 HR.	24-HR.	1 HR.	24-HR.	1 YEAR
SOUTH EAST	51037	Confederate Park Info Centre Bldg.													
	51038	Hawkesbury General Hospital	147	.000	.000	.000	.000	.017	.095	.008	.51	.05	6	NIL	INS
		342 McGill													
	52020	Hawkesbury Churchill Park	56	.000	.000	.004	.011	.066	.224	.024	.41	.13	8	2	INS
		Napier St.													
NORTH WEST	56051	Kingston Memorial Park	275	.000	.000	.000	.000	.000	.014	.001	.04	.02	NIL	NIL	NIL
		Cornwall	366	.000	.000	.000	.008	.027	.089	.012	.30	.08	2	NIL	NIL
	61010	Lassie/Dickenson Rds.													
	63022	Balmertown Hospital	249	.000	.000	.000	.000	.005	.290	.011	.70	.18	76	6	INS
		35 Algoma St. N.													
NORTH EAST	63040	Thunder Bay 435 James St. S.	348	.000	.000	.000	.000	.000	.010	.001	.10	.01	NIL	NIL	NIL
		Thunder Bay	341	.000	.000	.000	.000	.000	.026	.001	.16	.02	NIL	NIL	NIL
	71001	29 Hillcrest Ave.													
	71022	Wawa	359	.000	.000	.000	.000	.007	.290	.011	1.86	.26	92	7	NIL
		Sault College													
	71049	Queens St.	66	.000	.000	.002	.008	.025	.079	.011	.13	.05	NIL	NIL	INS
		Sault Ste. Marie Land Reg. Office													
	71057	Queen St	217	.000	.000	.000	.000	.000	.017	.001	.08	.02	NIL	NIL	INS
		Sault Ste. Marie Michipicoten Ave.													
	71058	Lot 38	358	.000	.000	.000	.000	.005	.203	.008	.86	.19	63	5	NIL
		Town of Mission													
	75010	Sir James Dunn Public School	311	.000	.000	.000	.000	.016	.350	.015	1.96	.24	104	10	NIL
		Wawa													
	75016	OPP Station	321	.000	.000	.000	.000	.008	.027	.004	.11	.03	NIL	NIL	NIL
		North Bay													
	77001	Dept. of Transport	127	.000	.000	.000	.000	.007	.035	.003	.14	.02	NIL	NIL	INS
		Verner													
	77009	Penage	342	.000	.000	.000	.000	.004	.087	.004	.43	.08	9	NIL	NIL
		Sudbury Airshed													
	77010	Burwash	356	.000	.000	.000	.000	.011	.094	.006	.41	.08	5	NIL	NIL
		Sudbury Airshed													
	77012	Callum	351	.000	.000	.000	.000	.010	.096	.006	.54	.06	9	NIL	NIL
		Sudbury Airshed													
	77013	Skead	344	.000	.000	.000	.000	.019	.213	.011	.85	.12	58	3	NIL
		Sudbury Airshed													
	77014	Hanmer	358	.000	.000	.000	.000	.009	.127	.007	.64	.09	23	NIL	NIL
		Sudbury Airshed													
	77016	Rayside	361	.000	.000	.000	.000	.006	.074	.004	.48	.07	7	NIL	NIL
		Sudbury Airshed													
	77017	Ash Street	353	.000	.001	.005	.010	.028	.129	.016	.56	.09	19	NIL	NIL
		Sudbury													
	77018	Morgan	96	.000	.000	.000	.000	.003	.069	.004	.24	.06	NIL	NIL	INS
		Sudbury Airshed													
	77023	St. Charles	312	.000	.000	.000	.000	.007	.056	.004	.20	.05	NIL	NIL	NIL
		Sudbury Airshed													
	77028	Happy Valley	366	.000	.000	.000	.000	.038	.377	.020	1.73	.33	160	12	NIL
		Falconbridge													
	77052	Government/Edward	359	.000	.000	.000	.007	.023	.205	.014	1.07	.11	54	1	NIL
		Coniston													
	77065	Lockerby	134	.000	.000	.000	.000	.010	.100	.006	.40	.09	6	NIL	INS
		Sudbury Airshed													
	77066	Falconbridge Rd., Garson	361	.000	.000	.000	.000	.018	.167	.009	.87	.09	32	NIL	NIL
		Sudbury District													
	77067	Temagami	223	.000	.000	.000	.000	.007	.052	.004	.18	.03	NIL	NIL	INS
		Sudbury Airshed													
	77075	Chiniguchi	116	.000	.000	.000	.000	.006	.057	.004	.20	.03	NIL	NIL	INS
		Sudbury Airshed													
		Kennedy St.													
		New Sudbury	357	.000	.000	.001	.007	.023	.149	.013	.51	.10	25	NIL	NIL

Table 3A/1980 – Continued . . .

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERIA		
				10	30	50	70	90	99		1 HR.	24-HR.	1 HR.	24-HR.	1 YEAR
NORTH- EAST	77079	Long Lake Dew Drop Rd. Sudbury	150	.000	.000	.000	.005	.024	.163	.012	.55	.07	14	NIL	INS
	77092	Laurentian Hospital 41 Ramsey Lake Rd. Sudbury	171	.000	.000	.000	.000	.015	.127	.008	.60	.11	10	1	INS
NEMP	22901	100 M S. Hwy. 59 Long Pt. Prov. Park	325	.000	.000	.001	.003	.008	.024	.003	.05	.02	NIL	NIL	NIL
	22902	Tyneside/Chippewa Rd. Binbrooke West	236	.000	.000	.002	.005	.013	.036	.005	.10	.03	NIL	NIL	INS

Table 3B/1980 Summary of Data: Sulphur Dioxide (all values in p.p.m.)

Ontario Criteria – 1 Hour Average: 0.25 p.p.m.; 24-Hour Average: 0.10 p.p.m.; 1 Year Average: 0.02 p.p.m.

INS – Indicates insufficient sample size to apply 1 Year average criterion

REGION	STATION NUMBER	LOCATION	NO. OF HOURS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERIA		
				10	30	50	70	90	99		1 HR.	24-HR.	1 HR.	24-HR.	1 YEAR
ONTARIO HYDRO		4.9 km ENE J.C. Keith Generating Station Windsor	4133	.000	.003	.008	.013	.028	.071	.012	.16	.05	NIL	NIL	INS
		5.4 km E Keith G.S.	5845	.000	.003	.007	.013	.028	.059	.011	.20	.04	NIL	NIL	INS
		5.7 km ESE Keith G.S.	7090	.000	.001	.004	.009	.020	.048	.008	.12	.03	NIL	NIL	NIL
		5.6 km SE Keith G.S.	7629	.000	.002	.005	.009	.022	.057	.009	.12	.04	NIL	NIL	NIL
		6.8 km SSE Keith G.S.	3599	.000	.002	.006	.011	.025	.058	.010	.11	.04	NIL	NIL	INS
		7 km NE Lambton G.S.	7159	.000	.001	.003	.007	.019	.082	.008	.37	.05	3	NIL	NIL
		8 km ENE Lambton G.S.	7452	.000	.000	.002	.006	.018	.062	.007	.59	.07	2	NIL	NIL
		5 km E Lambton G.S.	5721	.000	.000	.000	.004	.015	.067	.006	.22	.05	NIL	NIL	INS
		7 km ESE Lambton G.S.	7211	.000	.000	.002	.005	.014	.065	.006	.19	.05	NIL	NIL	NIL
		7 km SSE Lambton G.S.	7908	.000	.000	.002	.004	.013	.056	.005	.22	.04	NIL	NIL	NIL
		7 km N Nanticoke G.S.	8423	.000	.000	.000	.003	.010	.039	.004	.14	.03	NIL	NIL	NIL
		15 km N Nanticoke G.S.	7401	.000	.000	.000	.002	.010	.029	.003	.26	.02	1	NIL	NIL
		5 km NNE Nanticoke	8272	.000	.000	.001	.004	.012	.039	.004	.30	.05	2	NIL	NIL
		9 km NNE Nanticoke G.S.	7934	.000	.001	.003	.006	.015	.043	.006	.25	.04	NIL	NIL	NIL
		16 km NNE Nanticoke G.S.	8205	.000	.001	.002	.006	.015	.055	.006	.40	.05	2	NIL	NIL
		20 km NNE Nanticoke G.S.	8293	.000	.000	.002	.004	.013	.043	.005	.31	.04	1	NIL	NIL
		19 km NE Nanticoke G.S.	8081	.000	.000	.002	.005	.014	.040	.005	.19	.04	NIL	NIL	NIL
		11 km ENE Nanticoke G.S.	6653	.000	.000	.000	.003	.010	.030	.003	.14	.02	NIL	NIL	NIL
		18 km ENE Nanticoke G.S.	7730	.000	.000	.001	.005	.010	.030	.004	.10	.02	NIL	NIL	NIL

Table 3B/1980 — Continued . . .

REGION	STATION NUMBER	LOCATION	NO. OF HOURS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERIA		
				10	30	50	70	90	99		1 HR.	24-HR.	1 HR.	24-HR.	1 YEAR
ONTARIO HYDRO		5 km E Nanticoke G.S.	7095	.000	.000	.001	.009	.015	.038	.006	.11	.04	NIL	NIL	NIL
		13 km W Nanticoke G.S.	8072	.000	.001	.002	.004	.011	.030	.004	.11	.03	NIL	NIL	NIL
		3 km WNW Nanticoke G.S.	8404	.000	.000	.000	.003	.010	.040	.004	.16	.04	NIL	NIL	NIL
		20 km WNW Nanticoke G.S.	7554	.000	.000	.000	.000	.010	.030	.003	.16	.04	NIL	NIL	NIL
		8 km NNW Nanticoke G.S.	8481	.000	.000	.001	.003	.010	.032	.004	.23	.05	NIL	NIL	NIL
		11 km NNW Nanticoke G.S.	8351	.000	.000	.001	.004	.011	.035	.004	.20	.04	NIL	NIL	NIL
		15 km NNW Nanticoke G.S.	8230	.000	.000	.002	.004	.012	.038	.004	.16	.04	NIL	NIL	NIL
		9 km NNE R.L. Hearn G.S.													
		Toronto 8 km NE Hearn G.S.	7401	.000	.001	.004	.008	.019	.052	.007	.11	.06	NIL	NIL	NIL
		7 km NNW Hearn G.S.	5820	.000	.002	.007	.012	.028	.063	.011	.14	.05	NIL	NIL	INS
		7 km NNE Lakeview G.S.	7707	.000	.003	.005	.010	.022	.058	.009	.15	.07	NIL	NIL	NIL
		Mississauga 12 km NNE Lakeview G.S.	6324	.000	.000	.002	.010	.020	.047	.007	.12	.03	NIL	NIL	INS
		5 km ENE Lakeview G.S.	6325	.000	.000	.000	.010	.018	.044	.005	.14	.04	NIL	NIL	INS
		15 km WSW Lakeview G.S.	7006	.000	.000	.003	.007	.022	.062	.008	.16	.06	NIL	NIL	NIL
		7 km W Lakeview G.S.	6624	.000	.000	.000	.000	.010	.040	.003	.30	.05	1	NIL	NIL
		13 km WNW Lakeview G.S.	7641	.000	.000	.003	.007	.018	.056	.007	.59	.11	12	1	NIL
		6 km NW Lakeview G.S.	6785	.000	.000	.000	.000	.010	.030	.003	.34	.04	1	NIL	NIL
		12 km NW Lakeview G.S.	5818	.000	.000	.002	.007	.016	.045	.006	.27	.04	1	NIL	INS
		19 km NW Lakeview G.S.	6461	.000	.000	.000	.000	.010	.030	.003	.16	.03	NIL	NIL	INS
		6 km NNW Lakeview G.S.	6664	.000	.001	.004	.007	.014	.038	.006	.14	.03	NIL	NIL	NIL
		14 km NNW Lakeview G.S.	8451	.000	.000	.001	.007	.017	.040	.006	.18	.04	NIL	NIL	NIL
		10 km N Lennox G.S.	6803	.000	.000	.000	.000	.010	.040	.004	.36	.02	2	NIL	NIL
		Bath 15 km NNE Lennox G.S.	8179	.000	.000	.000	.002	.006	.020	.002	.05	.02	NIL	NIL	NIL
		7 km NE Lennox G.S.	7932	.000	.000	.000	.000	.006	.020	.001	.04	.02	NIL	NIL	NIL
		10 km SW Lennox G.S.	7494	.000	.000	.000	.002	.008	.020	.002	.04	.02	NIL	NIL	NIL
		10 km W Lennox G.S.	7703	.000	.000	.001	.002	.007	.021	.003	.05	.02	NIL	NIL	NIL
		10 km NW Lennox G.S.	8623	.000	.000	.000	.002	.006	.019	.002	.03	.02	NIL	NIL	NIL
		4 km N Thunder Bay G.S.	7247	.000	.000	.001	.003	.009	.024	.003	.04	.02	NIL	NIL	NIL
		4 km SSE Thunder Bay G.S.	7052	.000	.000	.000	.002	.005	.027	.002	.13	.02	NIL	NIL	NIL
		5 km WSW Thunder Bay G.S.	8704	.000	.000	.000	.001	.005	.025	.002	.08	.02	NIL	NIL	NIL
		5 km W Thunder Bay G.S.	4132	.000	.000	.001	.003	.008	.039	.003	.18	.02	NIL	NIL	INS
		14 km W Thunder Bay G.S.	5429	.000	.000	.000	.003	.010	.039	.004	.17	.04	NIL	NIL	INS
		5 km NW Thunder Bay G.S.	5433	.000	.000	.000	.001	.002	.010	.001	.03	.01	NIL	NIL	INS
		15 km NW Thunder Bay G.S.	7800	.000	.000	.000	.002	.005	.025	.002	.13	.01	NIL	NIL	NIL
		Thunder Bay G.S.	2118	.000	.000	.000	.000	.000	.010	.000	.04	.01	NIL	NIL	INS

TABLE 4/1980 Summary of Data: Soiling Index – 1 Hour (all values are in COH's/1,000ft.)**Ontario Criteria – 24-Hour Average – 1.0 COH's/1,000 ft. 1 Year Average – 0.5 COH's/1,000 ft.****INS – Indicates insufficient sample size to apply 1 year average criterion**

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH-METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERIA	
				10	30	50	70	90	99		1 HR.	24-HR.	24-HR.	1 YEAR
SOUTH WEST	12008	467 University Ave. W. Windsor	363	.03	.20	.30	.46	.78	1.50	0.42	3.3	1.3	3	NIL
	12016	College/South St. Windsor	362	.00	.18	.29	.44	.76	1.47	0.41	2.9	1.1	1	NIL
	14064	Centennial Park Front St./CN Tracks Sarnia	360	.00	.07	.19	.31	.55	1.04	0.27	2.8	1.0	NIL	NIL
	15001	King/Rectory London	364	.00	.12	.24	.37	.65	1.22	0.33	3.00	0.9	NIL	NIL
WEST CENTRAL	22071	Experimental Farm Simcoe	358	.00	.00	.11	.20	.34	.65	0.17	2.2	0.7	NIL	NIL
	27037	North/Geneva St. St. Catharines	363	.00	.14	.22	.31	.55	1.19	0.31	2.8	1.0	NIL	NIL
	27049	Murray/Buchanan Ave. Niagara Falls	366	.00	.07	.16	.24	.40	.82	0.22	4.3	0.9	NIL	NIL
	29008	North Park Hamilton	360	.06	.27	.55	.92	1.45	2.18	0.72	4.3	1.9	81	1
	29011	Burlington/Leeds Hamilton	164	.00	.30	.39	.59	1.18	2.33	0.57	4.0	1.6	14	INS
	29025	Barton/Wentworth Hamilton	364	.12	.25	.39	.59	1.01	1.88	0.54	3.5	1.6	20	1
CENTRAL	31001	67 College St., 5th Floor Toronto	363	.00	.14	.24	.37	.65	1.21	0.34	2.7	1.1	1	NIL
	31105	Sherbourne/Wilton St. Toronto	360	.10	.23	.36	.56	.98	1.93	0.52	4.5	1.5	14	1
	33003	Lawrence/Kennedy Scarborough	342	.00	.14	.24	.38	.68	1.33	0.35	3.5	1.1	1	NIL
	34002	Science Centre Don Mills Rd. North York	261	.00	.11	.21	.34	.59	1.04	0.30	2.2	0.9	NIL	INS
	34007	Bathurst/Wilson North York	360	.00	.16	.32	.58	1.04	1.74	0.48	3.1	1.5	21	NIL
	35003	Elmcrest Rd. Etobicoke	364	.00	.05	.18	.30	.60	1.20	0.28	2.4	1.1	1	NIL
	35033	Evans/Arnold Ave. Etobicoke	358	.00	.17	.29	.46	.83	1.64	0.42	3.0	1.4	5	NIL
	44015	Bronte Rd./Woburn Cres. Oakville	81	.00	.09	.21	.35	.63	1.07	0.30	1.5	0.7	NIL	INS
	45025	Ritson Rd./Olive Ave. Oshawa	355	.00	.09	.21	.34	.64	1.35	0.31	3.6	1.1	1	NIL
SOUTH EAST	51001	McDonald Gdns. Ottawa	366	.00	.00	.05	.16	.29	.67	0.14	1.3	0.5	NIL	NIL
	56051	Memorial Park Cornwall	364	.00	.00	.11	.19	.37	.95	0.18	3.0	1.0	NIL	NIL
NORTH EAST	77016	Ash St. Sudbury	365	.00	.00	.00	.14	.28	.73	0.13	2.8	0.7	NIL	NIL
	77028	Government/Edward St. Coniston	365	.00	.00	.00	.14	.33	.97	0.14	1.8	0.8	NIL	NIL
	77075	Kennedy St. New Sudbury	366	.00	.00	.00	.11	.27	.77	1.11	1.9	0.6	NIL	NIL

Table 5/1980 Summary of Data: Soiling Index – 2 Hour (all values are in COH's/1,000 ft.)**Ontario Criteria – 24 Hour Average – 1.0 COH's/1,000 ft. 1 Year Average – 0.5 COH's/1,000 ft.****INS – Indicates insufficient sample size to apply 1 year average criterion**

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH-METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERIA	
				10	30	50	70	90	99		1 HR.	24-HR.	24-HR.	1 YEAR
SOUTH WEST	15003	362 Dundas St. London	325	.00	.05	.14	.19	.37	.68	0.20	1.4	0.6	NIL	NIL
WEST CENTRAL	21006	Post Office Brantford	146	.00	.00	.10	.17	.29	.55	0.15	.09	.03	NIL	INS

Table 5/1980 — Continued . . .

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERIA	
				10	30	50	70	90	99		1 HR.	24-HR.	24-HR.	1 YEAR
WEST CENTRAL	22086	Cheapside Rd. 3 Km S of Hwy 3												
	26001	Nanticoke Pub. Util. Sub. Station 65 Weber St. S.	350	.00	.00	.05	.15	.28	.61	0.13	1.0	0.4	NIL	NIL
		Waterloo	138	.00	.00	.08	.16	.29	.70	0.15	1.3	0.5	NIL	NIL
	26029	Edna/Frederick St.												
		Kitchener	364	.00	.05	.15	.26	.55	1.10	0.26	2.4	1.0	NIL	NIL
	27051	Holy Trinity Church Norton/Portage												
		Chippewa	333	.00	.05	.15	.23	.48	.97	0.23	1.7	0.6	NIL	NIL
	28025	Farquhar/Wyndham St.												
		Guelph	95	.00	.00	.11	.17	.36	.69	0.17	1.2	0.4	NIL	INS
	29001	Hughson/Hunter												
		Hamilton	322	.00	.01	.14	.23	.49	.98	0.23	1.6	0.8	NIL	NIL
	29009	Kenilworth												
		Hamilton	349	.00	.00	.12	.19	.41	.86	0.19	1.5	0.6	NIL	NIL
	29011	Burlington/Leeds												
		Hamilton	138	.00	.05	.17	.28	.57	.98	0.26	1.6	0.6	NIL	INS
	29012	Burlington/Wellington												
		Hamilton	334	.00	.00	.12	.19	.41	.88	0.20	4.1	2.0	1	NIL
	29015	Merrick St.												
		Hamilton	364	.00	.02	.15	.24	.52	1.13	0.24	2.1	0.9	NIL	NIL
	29017	Chatham-Frid												
		Hamilton	322	.00	.00	.14	.23	.48	.95	0.22	1.9	0.8	NIL	NIL
	29067	450 Hughson St. N.												
		Hamilton	352	.00	.00	.13	.20	.40	.82	0.20	3.8	0.7	NIL	NIL
CENTRAL	33019	Met. Branch Scarborough Bluffs												
		Scarborough	349	.00	.00	.11	.18	.36	.77	0.17	1.4	0.7	NIL	NIL
	34002	Science Centre Don Mills Rd.												
		North York	365	.00	.05	.15	.25	.50	1.08	0.24	2.1	0.8	NIL	NIL
	35005	Queensway Hospital												
		Etobicoke	359	.00	.00	.12	.19	.43	1.12	0.20	3.2	0.9	NIL	NIL
	35008	22 Thirty Sixth St.												
		Etobicoke	327	.00	.00	.11	.18	.35	.82	0.17	2.0	0.6	NIL	NIL
	35050	MOE Lab.												
		Resources Rd.												
		Etobicoke	366	.00	.02	.13	.21	.46	.89	0.22	1.9	0.9	NIL	NIL
	44008	Hwy 2/North Shore Blvd. E.												
		Burlington	365	.00	.01	.13	.19	.42	.86	0.20	1.7	0.6	NIL	NIL
	44010	1298 Rebecca St.												
		Oakville	69	.00	.11	.18	.31	.59	1.06	0.29	1.6	0.9	NIL	INS
	44015	Bronte Rd./Woburn Cres.												
		Oakville	174	.00	.06	.14	.21	.43	.91	0.22	1.5	0.6	NIL	INS
	45024	206 Eulalie St.												
		Oshawa	365	.00	.05	.15	.24	.47	.89	0.23	1.8	0.8	NIL	NIL
	46025	Mississauga Public Library												
		Mississauga	319	.00	.00	.12	.19	.42	.93	0.19	1.9	0.8	NIL	NIL
	46033	Bramalea Fire Hall												
		Bramalea	329	.00	.00	.12	.19	.45	.95	0.20	2.3	0.8	NIL	NIL
	46100	Public School Green Glade Rd.												
		Mississauga	342	.00	.00	.12	.18	.37	.89	0.19	2.2	0.6	NIL	NIL
	46110	Queensway West/ Huronario St.												
		Mississauga	361	.00	.07	.16	.25	.55	1.23	0.26	2.3	0.8	NIL	NIL
	47041	Fed. Manpower Bldg. 48 Owen St.												
		Barrie	331	.00	.00	.04	.14	.26	.62	0.13	1.5	0.5	NIL	NIL
	48002	MTC Yard #9												
		Hwy. 47												
		Stouffville	273	.00	.00	.01	.13	.26	.64	0.12	2.1	0.7	NIL	NIL
	59006	City Hall												
		500 George St.												
		Peterborough	302	.00	.01	.13	.19	.42	.97	0.21	2.1	1.0	NIL	NIL
SOUTH EAST	52018	1055 Princess St.												
		Kingston	127	.00	.00	.13	.20	.38	.73	0.19	1.3	0.4	NIL	INS

Table 5/1980 – Continued . . .

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERIA	
				10	30	50	70	90	99		1 HR.	24-HR.	24-HR.	1 YEAR
SOUTH EAST	52020	Churchill Park Napier St. Kingston	346	.00	.00	.04	.15	.29	.71	0.14	1.5	0.5	NIL	NIL
NORTH WEST	63022	Hospital, 35 Algoma St. N. Thunder Bay	361	.00	.00	.11	.18	.33	.67	0.17	2.0	0.4	NIL	NIL
	63040	435 James St. Thunder Bay	347	.00	.00	.11	.17	.33	.73	0.16	1.3	0.5	NIL	NIL
NORTH EAST	75010	OPP Station North Bay	76	.00	.00	.06	.15	.28	.66	0.14	1.0	0.4	NIL	INS
	77023	Happy Valley Falconbridge	140	.00	.00	.07	.15	.24	.48	0.13	2.8	0.7	NIL	INS
	77026	19 Lisgar St. Sudbury	191	.00	.00	.11	.17	.33	.70	0.17	2.0	0.7	NIL	INS
NEMP	22901	100m S. Hwy. 59 Long Point Prov. Park	329	.00	.00	.05	.14	.24	.44	0.12	1.1	0.3	NIL	NIL
	22902	Tyneside/Chippewa Rd. Binbrook West	354	.00	.00	.09	.17	.29	.63	0.15	1.6	0.5	NIL	NIL

Table 6/1980 Summary of Data: Carbon Monoxide (all values in p.p.m.)

Ontario Criteria – 1 Hour Average: 30 p.p.m. 8 Hour Average: 13 p.p.m.

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERIA	
				10	30	50	70	90	99		1 HR.	8-HR.	1 HR.	8 HR.
SOUTH WEST	12008	467 University Ave. Windsor	363	0.2	0.6	1.0	1.5	2.2	4.7	1.7	13	7	NIL	NIL
	14064	Centennial Park Front St./CN Tracks Sarnia	357	0.0	0.0	0.0	0.0	0.6	1.8	0.3	5	3	NIL	NIL
	15001	King-Rectory London	358	0.0	0.0	0.0	0.0	0.7	2.9	0.3	12	6	NIL	NIL
WEST CENTRAL	26029	Edna/Frederick St. Kitchener	306	0.0	0.1	0.5	0.9	1.8	4.1	1.1	12	6	NIL	NIL
	27037	North/Geneva St. St. Catharines	341	0.0	0.0	0.0	0.4	0.9	3.6	0.6	10	7	NIL	NIL
	29025	Barton/Wentworth Hamilton	343	0.0	0.0	0.3	0.8	1.8	4.0	0.9	10	6	NIL	NIL
CENTRAL	31001	67 College St., 5th Flr. Toronto	358	0.0	0.3	0.7	1.1	1.9	3.5	1.3	9	5	NIL	NIL
	31049	Mission, 381 Yonge St. Toronto	340	0.4	1.6	2.7	4.2	7.7	21.2	4.2	38	26	20	39
	31090	67 College St., 2nd Flr. Toronto	347	1.8	2.8	3.6	4.6	6.3	9.8	4.4	17	13	NIL	NIL
	31105	Sherbourne/Wilton St. Toronto	364	0.0	0.4	0.8	1.3	2.0	4.4	1.4	11	6	NIL	NIL
	33003	Lawrence/Kennedy Scarborough	353	0.1	0.5	0.9	1.4	2.1	4.5	1.5	11	6	NIL	NIL
	34002	Science Centre Don Mills Rd.												
	34007	North York Bathurst/Wilson	346	0.0	0.4	0.8	1.3	2.0	3.8	1.4	9	6	NIL	NIL
	35003	North York Elmcrest Rd.	362	0.2	0.9	1.5	2.2	3.4	5.8	2.2	11	7	NIL	NIL
	35033	Etobicoke Evans – Arnold Ave.	362	0.0	0.3	0.5	0.8	1.5	2.9	1.1	13	5	NIL	NIL
		Etobicoke	357	0.0	0.4	0.9	1.5	2.5	4.6	1.5	9	6	NIL	NIL
	44010	1298 Rebecca St. Oakville	68	0.1	0.4	0.7	1.0	1.7	2.7	1.3	6	3	NIL	NIL
	44015	Bronte Rd./Woburn Cres. Oakville	264	0.0	0.2	0.5	0.8	1.7	3.5	1.1	9	5	NIL	NIL
	45025	Ritson Rd./Olive Ave. Oshawa	361	0.2	0.6	1.1	1.7	2.7	4.8	1.8	13	9	NIL	NIL

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERIA	
				10	30	50	70	90	99		1 HR.	8-HR.	1 HR.	8 HR.
CENTRAL	46110	Queensway West/ Hurontario St. Mississauga	365	0.2	0.6	0.9	1.6	2.8	5.9	1.8	12	8	NIL	NIL
SOUTH- EAST	51001	McDonald Gdns. Ottawa	364	0.0	0.2	0.6	1.0	1.9	3.5	1.2	8	6	NIL	NIL
	56051	Memorial Park Cornwall	353	0.0	0.2	0.5	0.8	1.4	2.9	1.1	8	5	NIL	NIL
NORTH- EAST	77016	Ash Street Sudbury	350	0.0	0.0	0.0	0.0	0.0	1..5	0.1	14	4	NIL	NIL
NEMP	22901	100m S. Hwy. 59 Long Point Prov. Pk.	332	0.0	0.0	0.0	0.0	0.0	0.8	0.1	2	1	NIL	NIL
	22902	Tyneside /Chippewa Rd. Binbrooke West	298	0.0	0.0	0.0	0.0	0.0	0.9	0.1	3	1	NIL	NIL

Table 7/1980 Summary of Data: Total Hydrocarbons and methane (all values are in p.p.m.)
No Existing Criteria

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM		
				10	30	50	70	90	99		1 HR.	24-HR.	
TOTAL HYDROCARBONS													
SOUTH WEST	12008	467 University Ave. W. Windsor	271	1.82	1.99	2.10	2.23	2.56	3.54	2.22	6.7	3.1	
	14064	Centennial Park Front St./CN Tracks											
	14902	Sarnia 286 Paget St.	358	1.31	1.53	1.70	1.93	2.48	3.95	1.86	6.8	3.5	
	14903	Corunna Virgil LaSalle Froomfield	111	1.74	1.87	2.01	2.15	2.55	3.85	2.15	6.6	3.2	
	15001	Sarnia King/Rectory	217	1.72	1.87	2.06	2.35	3.10	5.16	2.33	14.3	4.2	
		London	357	1.90	2.10	2.27	2.47	2.85	4.48	2.41	9.9	3.9	
	CENTRAL	31001	67 College St., 5th Flr. Toronto	360	0.91	1.18	1.36	1.53	1.88	2.56	1.43	6.1	2.2
		33003	Lawrence/Kennedy Scarborough										
34002		Science Centre Don Mills Rd. North York	338	1.14	1.27	1.38	1.56	1.99	3.17	1.54	6.6	2.9	
34007		Bathurst/Wilson North York	351	1.01	1.18	1.30	1.48	1.98	3.30	1.48	5.5	2.8	
35003		Elmcrest Rd. Etobicoke	357	1.38	1.63	1.82	2.02	2.42	3.31	1.92	5.7	3.4	
35033		Evans/Arnold Ave. Etobicoke	354	1.69	1.83	1.97	2.17	2.68	4.45	2.17	10.4	4.3	
44010		1298 Rebecca St. Oakville	343	1.24	1.46	1.64	1.93	2.57	3.58	1.84	5.6	3.5	
44015		Bronte Rd./Woburn Cres. Oakville	59	1.86	2.00	2.12	2.25	2.50	3.43	2.22	4.8	3.4	
			255	1.63	1.97	2.30	2.69	3.39	5.92	2.52	19.3	4.6	
METHANE NEMP													
	22903	Cheapside Rd. / Walpole Conc. 5 Nanticoke	277	1.23	1.33	1.38	1.45	1.57	1.79	1.44	2.8	1.8	
	22904	Walpole South P.S. Sandusk Rd. Nanticoke											
	22905	Nanticoke Rd./ Walpole Conc. 5 Nanticoke	286	1.11	1.20	1.26	1.33	1.48	2.84	1.36	5.9	2.1	
			275	1.18	1.36	1.44	1.51	1.66	2.03	1.48	3.2	1.8	

Table 8/1980 Summary of Data: Reactive Hydrocarbons (all values are in p.p.m.)
No Existing Criteria

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH-METIC MEAN	MAXIMUM	
				10	30	50	70	90	99		1 HR.	24-HR.
SOUTH WEST	12008	467 University Ave. W. Windsor	43	.26	.34	.39	.47	.59	1.10	0.47	1.5	0.8
	14902	286 Paget St. Corunna	119	.04	.14	.22	.31	.70	1.92	0.37	3.7	1.3
	14903	Virgil LaSalle Froomfield Sarnia	223	.06	.16	.29	.55	1.21	2.94	0.56	11.1	1.7
WEST CENTRAL	27037	North/Geneva St. St. Catharines	243	.00	.04	.10	.19	.36	.95	0.20	4.2	0.8
	29008	North Park Hamilton	198	.02	.10	.14	.19	.29	.46	0.20	1.0	0.4
CENTRAL	31001	67 College St., 5th Flr. Toronto	340	.03	.09	.14	.19	.29	.59	0.21	1.2	0.5
NEMP	22903	Cheapside Rd. / Walpole Conc. 5 Nanticoke	260	.02	.15	.28	.40	.60	.90	0.36	12.5	1.8
	22904	Walpole South P.S. Sandusk Rd. Nanticoke	274	.14	.33	.48	.60	.84	1.39	0.55	7.7	1.4
	22905	Nanticoke Rd. / Walpole Conc. 5 Nanticoke	268	.34	.50	.61	.72	.86	1.05	0.66	1.8	1.0

Table 9/1980 Summary of Data: Ozone (all values in p.p.m.)
Ontario Criteria -- 1 Hour Average: 0.08 p.p.m.

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH-METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERION
				10	30	60	70	90	99		1 HR.	24 HR.	
SOUTH-WEST	10001	College of Agric. Tech. Huron Park	358	.007	.015	.021	.027	.041	.073	.024	.120	.063	41
	12008	467 University Ave. W. Windsor	342	.000	.005	.014	.024	.047	.089	.020	.131	.068	149
	13021	MOE Pump. Stn. Middle Rd. Merlin	320	.005	.013	.020	.028	.045	.078	.024	.137	.075	61
	14064	Centennial Park Front St./CN Tracks Sarnia	366	.002	.011	.019	.027	.042	.077	.022	.155	.058	68
	14118	PUC Water Pump. Stn. Hwy. 21 Petrolia	350	.005	.013	.020	.027	.040	.071	.022	.125	.061	39
	14902	286 Paget St. Corunna	105	.005	.014	.020	.026	.033	.050	.020	.083	.038	1
	14903	Virgil LaSalle Froomfield Sarnia	227	.002	.011	.020	.031	.048	.087	.024	.126	.065	81
	15001	King/Rectory London	356	.001	.008	.015	.022	.039	.072	.018	.111	.064	49
	18007	Concession Rd., Lot 2 Tiverton	300	.010	.018	.024	.028	.037	.061	.024	.088	.059	4
WEST CENTRAL	22071	Experimental Farm Simcoe	351	.009	.018	.024	.030	.045	.074	.026	.099	.072	45
	26029	Edna/Frederick St. Kitchener	358	.000	.009	.017	.026	.044	.075	.021	.098	.076	44
	27037	North/Geneva St. St. Catharines	352	.002	.010	.017	.024	.042	.075	.021	.138	.071	58
	29025	Barton/Wentworth Hamilton	359	.001	.007	.014	.021	.037	.067	.107	.107	.062	24
CENTRAL	31001	67 College St., 5th Flr. Toronto	359	.000	.005	.012	.020	.035	.069	.016	.121	.046	40
	31105	Sherbourne/Wilton Toronto	359	.000	.002	.007	.013	.024	.045	.010	.077	.035	NIL

Table 9/1980 - Continued . . .

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH-METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERION 1 HR.
				10	30	60	70	90	99		1 HR.	24 HR.	
CENTRAL	33003	Lawrence/Kennedy											
		Scarborough	350	.000	.004	.010	.018	.031	.062	.014	.108	.043	21
	34002	Science Centre											
		Don Mills Rd.											
		North York	355	.000	.004	.012	.022	.036	.075	.016	.125	.050	60
	35003	Elmcrest Rd.											
		Etobicoke	358	.000	.002	.009	.017	.031	.072	.013	.129	.056	44
	35033	Evans - Arnold Ave.											
		Etobicoke	334	.000	.002	.005	.010	.022	.056	.009	.107	.046	16
	44008	Hwy. 2/											
		North Shore Blvd. E.											
		Burlington	363	.000	.007	.013	.021	.036	.068	.017	.118	.060	39
	44010	1298 Rebecca St.											
		Oakville	63	.000	.007	.013	.018	.024	.030	.013	.035	.023	NIL
SOUTH-EAST	44015	Bronte Rd./Woburn Cres.											
		Oakville	257	.001	.012	.020	.029	.046	.075	.023	.109	.058	31
	45025	Ritson Rd./Olive Ave.											
		Oshawa	365	.001	.008	.015	.022	.032	.068	.017	.129	.048	43
	45125	Natural Resources Bldg.											
		Orono	161	.009	.019	.025	.030	.041	.080	.026	.151	.069	40
	46110	Queensway W./											
		Hurontario St.											
		Mississauga	360	.000	.006	.013	.020	.032	.063	.016	.120	.051	32
	48002	MTC Yard, Hwy. 47											
		Stouffville	320	.007	.016	.021	.027	.038	.068	.023	.137	.080	36
SOUTH-EAST	51001	McDonald Gdn.											
		Ottawa	337	.001	.007	.014	.020	.030	.051	.015	.083	.058	3
	56051	Memorial Park											
		Cornwall	351	.006	.016	.023	.030	.041	.077	.025	.100	.085	64
NORTH-EAST	71049	Land Reg. Office											
		Queen St.											
		Sault Ste. Marie	146	.001	.010	.016	.023	.038	.064	.019	.081	.053	1
	71057	Michipicoten Ave.											
		Lot 38											
		Mission	108	.001	.012	.022	.031	.049	.078	.024	.110	.066	20
	77016	Ash Street											
		Sudbury	358	.004	.009	.012	.015	.024	.048	.014	.078	.049	NIL
NEMP	22901	100m S. Hwy. 59											
		Long Pt. Prov. Park	317	.012	.022	.028	.036	.059	.095	.033	.123	.091	225
	22902	Tyneside/Chippewa Rd.											
		Binbrooke West	261	.006	.016	.022	.028	.040	.068	.024	.102	.074	15

Table 10/1980 Summary of Data: Total Reduced Sulphur (all values in p.p.b.)
No Existing Criteria

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH-METIC MEAN	MAXIMUM	
				10	30	60	70	90	99		1 HR.	24 HR.
SOUTH-WEST	14062	242 Indian Rd. S.										
		Sarnia	320	0.0	0.0	0.0	0.0	1.0	4.1	0.4	19	5
	18007	Concession Rd. 2										
		Lot A										
		Tiverton	307	0.0	0.0	0.0	0.0	0.0	1.7	0.8	8	2
WEST CENTRAL	27051	Holy Trinity Church										
		Norton/Portage										
		Chippawa	329	0.0	0.0	0.0	6.3	34.4	123.0	11.5	401	102
	29008	North Park										
		Hamilton	336	0.0	0.0	0.0	1.6	4.9	12.7	1.8	44	13
	29025	Barton/Wentworth										
		Hamilton	311	0.0	0.0	0.0	0.0	2.0	11.9	0.9	61	14
CENTRAL	44015	Bronte Rd./Woburn Cres.										
		Oakville	207	0.0	0.0	0.0	0.1	4.7	13.6	1.5	48	11
SOUTH-EAST	56051	Memorial Park										
		Cornwall	362	0.0	0.0	0.0	1.6	8.0	26.7	2.8	97	14

Table 10/1980 – Continued . . .

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM	
				10	30	60	70	90	99		1 HR.	24 HR.
SOUTH- EAST	56058	435 Second St. W. Cornwall	320	0.0	0.0	1.1	3.6	11.5	36.1	4.3	213	30
NORTH- WEST	61026	56 King St. Dryden	275	0.0	0.0	0.0	1.1	16.9	89.3	6.0	360	58
	62030	Portage /Church St. Fort Frances	352	0.0	0.0	0.0	2.0	28.1	125.6	9.3	499	77
	62032	Cemetary Colonization Rd. W. Fort Frances	307	0.0	0.0	0.0	0.4	9.7	44.7	3.3	124	26
	63046	Montreal St. Thunder Bay	220	0.0	0.0	0.0	0.7	8.6	33.8	2.9	131	30
NORTH- EAST	72063	Municipal Garage Smooth Rock Falls	71	0.0	0.0	0.0	0.0	0.0	7.8	0.3	29	7
NEMP	22903	Cheapside Rd. / Walpole Conc. 5										
		Nanticoke	169	0.0	0.0	0.0	0.0	1.4	3.0	0.5	14	3
	22904	Walpole South P.S. Sandusk Rd. Nanticoke	197	0.0	0.0	0.0	0.0	0.7	0.9	0.3	9	2
	22905	Nanticoke Rd. / Walpole Conc. 5 Nanticoke	250	0.0	0.0	0.0	0.0	0.7	2.3	.03	34	2

Table 11/1980 Summary of Data: Nitrogen Dioxide (all values in p.p.m.)

Ontario Criteria – 1 Hour Average: 0.20 p.p.m.

24-Hour Average: 0.10 p.p.m.

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERIA	
				10	30	50	70	90	98		1 HR.	24-HR.	1 HR.	24-HR.
SOUTH- WEST	12008	467 University Ave. W. Windsor	358	.010	.018	.025	.031	.044	.069	.031	.16	.06	NIL	NIL
	14064	Centennial Park Front St./CN Tracks Sarnia	357	.000	.007	.014	.023	.039	.066	.022	.14	.06	NIL	NIL
	14902	286 Paget St. Corunna	113	.000	.003	.007	.014	.024	.040	.014	.06	.04	NIL	NIL
	14903	Virgil LaSalle Froomfield Sarnia	122	.000	.004	.008	.014	.024	.049	.015	.08	.04	NIL	NIL
	15001	King/Rectory London	353	.000	.007	.014	.021	.034	.051	.020	.10	.05	NIL	NIL
	WEST CENTRAL	22071	Experimental Farm Simcoe	350	.000	.003	.007	.011	.018	.032	.012	.09	.03	NIL
	22086	Cheapside Rd. 3 Km S. of Hwy. 3 Nanticoke	315	.000	.000	.002	.007	.016	.034	.008	.06	.04	NIL	NIL
	26029	Edna/Frederick St. Kitchener	314	.003	.014	.020	.027	.039	.065	.026	.11	.06	NIL	NIL
	27037	North/Geneva St. St. Catharines	356	.001	.009	.015	.021	.029	.045	.020	.09	.05	NIL	NIL
	29008	North Park Hamilton	346	.000	.012	.021	.029	.049	.091	.028	.15	.10	NIL	NIL
	29025	Barton/Wentworth Hamilton	356	.003	.014	.021	.028	.039	.060	.027	.15	.06	NIL	NIL
CENTRAL	31001	67 College St., 5th Flr. Toronto	357	.005	.014	.021	.028	.043	.073	.028	.14	.09	NIL	NIL
	31105	Sherbourne/Wilton Toronto	351	.008	.016	.023	.030	.047	.079	.030	.13	.08	NIL	NIL
	33003	Lawrence/Kennedy Scarborough	348	.005	.016	.024	.031	.046	.076	.030	.24	.09	1	NIL
	34002	Science Centre Don Mills Rd. North York	362	.000	.007	.014	.021	.030	.055	.020	.14	.05	NIL	NIL
	34007	Bathurst/Wilson North York	274	.001	.010	.019	.029	.056	.101	.029	.17	.09	NIL	NIL

Table 11/1980 – Continued . . .

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM		NUMBER OF TIMES ABOVE CRITERIA	
				10	30	50	70	90	98		1 HR.	24-HR.	1 HR.	24-HR.
CENTRAL	35003	Elmcrest Rd. Etobicoke	358	.000	.005	.011	.018	.029	.050	.018	.10	.05	NIL	NIL
	35033	Evans / Arnold Ave. Etobicoke	352	.014	.023	.029	.036	.049	.070	.036	.12	.07	NIL	NIL
	44008	Hwy. 2/ North Shore Blvd. E. Burlington	185	.001	.007	.013	.018	.028	.044	.019	.08	.04	NIL	NIL
	44010	1298 Rebecca St. Oakville	69	.002	.007	.013	.019	.027	.043	.019	.06	.04	NIL	NIL
	44015	Bronte Rd. / Woburn Cres. Oakville	210	.000	.008	.016	.024	.038	.064	.023	.19	.05	NIL	NIL
	45025	Ritson Rd. / Olive Ave. Oshawa	358	.000	.005	.012	.020	.033	.059	.019	.12	.06	NIL	NIL
	46110	Queensway W. / Hurontario St. Mississauga	342	.004	.014	.021	.028	.038	.059	.027	.10	.06	NIL	NIL
	58030	132 King St. Port Hope	36	.000	.003	.006	.009	.017	.026	.012	.03	.02	NIL	NIL
	SOUTH- EAST	51001	McDonald Gdn. Ottawa	335	.000	.002	.009	.017	.031	.056	.017	.15	.05	NIL
56051		Memorial Park Cornwall	347	.000	.000	.004	.009	.020	.044	.011	.09	.05	NIL	NIL
NORTH- EAST	77016	Ash Street Sudbury	349	.000	.000	.000	.005	.013	.029	.006	.08	.03	NIL	NIL

Table 12/1980 Summary of Data: Nitric Oxide (all values in p.p.m.)
No Existing Criteria

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM	
				10	30	60	70	90	99		1 HR.	24 HR.
SOUTH- EAST	12008	467 University Ave. W. Windsor	360	.000	.000	.003	.013	.047	.166	.019	.53	.14
	14064	Centennial Park Front St./CN Tracks										
		Sarnia	359	.000	.000	.000	.007	.020	.068	.010	.26	.06
	14902	286 Paget St.										
		Corunna	89	.000	.000	.000	.002	.009	.038	.005	.12	.03
	14903	Virgil LaSalle Froomfield										
		Sarnia	119	.000	.000	.000	.000	.007	.027	.003	.08	.02
	15001	King Rectory London										
WEST CENTRAL			353	.000	.000	.004	.011	.036	.128	.016	.50	.08
	22071	Experimental Farm Simcoe	326	.000	.000	.000	.000	.000	.011	.001	.08	.01
	22086	Cheapside Rd. 3 Km S. of Hwy. 3										
		Nanticoke	302	.000	.000	.000	.000	.005	.017	.002	.13	.02
	26029	Edna/Frederick St. Kitchener										
	27037	North/Geneva St. St. Catharines	288	.000	.000	.005	.024	.110	.338	.037	.84	.26
	29008	North Park Hamilton										
	29025	Barton/Wentworth Hamilton	363	.000	.004	.042	.087	.157	.265	.065	.52	.16
CENTRAL			355	.000	.000	.005	.017	.053	.159	.021	.43	.13
	31001	67 College St., 5th Flr. Toronto	357	.000	.000	.003	.012	.039	.126	.016	.30	.09
	31105	Sherbourne/Wilton Toronto										
			350	.000	.000	.011	.032	.089	.264	.035	.73	.17
	33003	Lawrence/Kennedy Scarborough										
			345	.000	.000	.009	.025	.070	.213	.029	.61	.15
	34002	Science Centre Don Mills Rd. North York										
			364	.000	.003	.009	.019	.064	.220	.028	.49	.16

Table 12/1980 – Continued . . .

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM	
				10	30	60	70	90	99		1 HR.	24 HR.
CENTRAL	34007	Bathurst/Wilson	316	.000	.003	.027	.116	.260	.486	.091	.83	.34
	35003	North York Elmcrest Rd.										
	35033	Etobicoke Evans/Arnold Ave.	352	.000	.000	.000	.008	.052	.211	.019	.68	.17
	44008	Etobicoke Hwy. 2/ North Shore Blvd. E.	353	.000	.013	.036	.067	.137	.349	.062	.80	.28
	44010	Burlington 1298 Rebecca St.	189	.000	.002	.007	.017	.052	.207	.024	.45	.13
	44015	Oakville Bronte Rd./Woburn Cres.	64	.000	.000	.000	.005	.019	.142	.011	.37	.06
	45025	Oakville Ritson Rd./Olive Ave.	212	.000	.001	.006	.011	.043	.164	.020	.41	.09
	46110	Oshawa Queensway West/ Hurontario St.	361	.000	.000	.001	.012	.041	.152	.017	.64	.14
	58030	Mississauga 132 King St. Port Hope	339	.000	.002	.007	.016	.056	.237	.026	.54	.17
			36	.000	.000	.000	.000	.008	.064	.004	.16	.02
SOUTH- EAST	51001	McDonald Gdns. Ottawa	337	.000	.000	.000	.007	.031	.136	.013	.42	.11
	56051	Memorial Park Cornwall										
			366	.000	.000	.000	.000	.013	.092	.007	.44	.11
NORTH- EAST	77016	Ash Street Sudbury	348	.000	.000	.000	.000	.009	.068	.005	.42	.09
NEMP	22901	100m S. Hwy. 59 Long Pt. Prov. Pk.	185	.002	.003	.005	.007	.012	.032	.007	.07	.04
	22902	Tyneside/Chippewa Rd. Binbrooke West	324	.000	.001	.003	.005	.011	.030	.005	.15	.03
	22906	Sandusk Rd. Btwn Walpole Conc. 4/5	283	.004	.005	.007	.009	.014	.036	.009	.14	.02
		Sandusk										

Table 13/1980 Summary of Data: Nitrogen Oxides (all values in p.p.m.)
No Existing Criteria

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM	
				10	30	60	70	90	99		1 HR.	24 HR.
SOUTH- WEST	12008	467 University Ave. W. Windsor	355	.011	.023	.035	.050	.087	.216	.050	.61	.18
	14064	Centennial Park Front St./CN Tracks										
	14902	Sarnia 286 Paget St.	341	.001	.011	.021	.035	.060	.108	.032	.27	.09
	14903	Corunna Virgil LaSalle Froomfield	89	.000	.004	.011	.019	.037	.076	.020	.15	.06
	15001	Sarnia King/Rectory	117	.000	.005	.010	.017	.030	.069	.018	.16	.05
		London	350	.002	.013	.022	.038	.070	.168	.037	.53	.11
WEST CENTRAL	22071	Experimental Farm Simcoe	292	.000	.003	.007	.012	.019	.041	.013	.10	.04
	22086	Cheapside Rd. 3 Km S. of Hwy. 3										
	26029	Nanticoke Edna/Frederick St.	276	.000	.000	.003	.008	.017	.035	.009	.18	.03
	27037	Kitchener North/Geneva St.	281	.007	.018	.030	.054	.141	.359	.061	.89	.31
	29008	St. Catharines North Park	279	.003	.011	.019	.029	.050	.123	.030	.44	.11
	29025	Hamilton Barton/Wentworth	344	.001	.025	.073	.128	.199	.302	.093	.55	.21
		Hamilton	274	.004	.019	.033	.050	.087	.180	.046	.34	.12

Table 13/1980 – Continued . . .

REGION	STATION NUMBER	LOCATION	NO. OF DAYS	PERCENTILES						ARITH- METIC MEAN	MAXIMUM	
				10	30	60	70	90	99		1 HR.	24 HR.
CENTRAL	31001	67 College St., 5th Flr. Toronto	357	.006	.018	.030	.046	.083	.180	.044	.36	.13
	31105	Sherbourne/Wilton Toronto	348	.009	.024	.044	.069	.129	.307	.065	.83	.22
	33003	Lawrence/Kennedy Scarborough	341	.007	.024	.042	.063	.110	.258	.059	.68	.24
	34002	Science Centre Don Mills Rd. North York	310	.003	.016	.027	.044	.090	.212	.044	.53	.16
	34007	Bathurst/Wilson North York	288	.003	.019	.052	.151	.317	.547	.119	.87	.38
	35003	Elmcrest Rd. Etobicoke	345	.000	.006	.015	.032	.082	.248	.037	.73	.21
	35033	Evans/Arnold Ave. Etobicoke	352	.024	.049	.074	.105	.178	.395	.097	.88	.32
	44008	Hwy. 2/ North Shore Blvd. E. Burlington	156	.004	.015	.025	.040	.077	.226	.042	.48	.11
	44010	1298 Rebecca St. Oakville	64	.002	.009	.017	.027	.050	.177	.030	.43	.09
	44015	Bronte Rd./Woburn Cres. Oakville	207	.003	.015	.026	.042	.081	.199	.042	.43	.12
	45025	Ritson Rd./Olive Ave. Oshawa	351	.000	.007	.020	.038	.077	.192	.037	.71	.17
	46110	Queensway West/ Huronario St. Mississauga	311	.011	.021	.031	.046	.086	.247	.048	.54	.15
	58030	132 King St. Port Hope	36	.000	.004	.008	.014	.026	.091	.016	.18	.04
SOUTH- EAST	51001	McDonald Gdn. Ottawa	335	.000	.004	.013	.028	.066	.182	.030	.48	.15
	56051	Memorial Park Cornwall	346	.000	.000	.006	.013	.037	.137	.018	.56	.15
NORTH- EAST	77016	Ash Street Sudbury	346	.000	.000	.000	.007	.025	.097	.011	.35	.11
NEMP	22901	100m S. Hwy. 59 Long Pt. Prov. Pk.	185	.005	.008	.012	.016	.024	.041	.014	.08	.02
	22902	Tyneside/Chippewa Rd. Binbrooke West	300	.003	.007	.011	.016	.027	.060	.014	.21	.06
	22906	Sandusk Rd. Btwn. Walpole Conc. 4/5 Sandusk	170	.008	.012	.015	.019	.028	.054	.017	.14	.03

Table 14/1980 Ontario's Air Pollution Index

Date Started:		TORONTO – MARCH 23, 1970		NIAGARA FALLS – NOVEMBER 1, 1974	
		HAMILTON – JUNE 15, 1970		CONISTON – FEBRUARY 18, 1975	
		SUDBURY – JANUARY 16, 1971		NEW SUDBURY – MARCH 1, 1976	
		WINDSOR – MARCH 19, 1971		SARNIA – DECEMBER 1, 1977	
		HAPPY VALLEY – MAY 13, 1971 (Closed Jan. 1975)		ST. CATHARINES – SEPTEMBER 14, 1979	
		WELLAND – JANUARY 1, 1974 (Closed Oct. 1978)			
YEAR	CITY	NUMBER OF OCCASIONS		MAXIMUM INDEX	DATE OF MAXIMUM
		≥ 32	≥ 50		
1970	TORONTO	17	2	56	OCT. 8
	HAMILTON	2	1	56	OCT. 8
1971	TORONTO	19	1	52	APR. 13
	HAMILTON	23	NIL	48	OCT. 21
	SUDBURY	26	3	87	DEC. 11
	WINDSOR	2	NIL	33	NOV. 10
	HAPPY VALLEY	20	7	64	NOV. 21

Table 14/1980 – Continued . . .

YEAR	CITY	NUMBER OF OCCASIONS		MAXIMUM INDEX	DATE OF MAXIMUM
		≥ 32	≥ 50		
1972	TORONTO	2	NIL	45	FEB. 13
	HAMILTON	6	NIL	41	FEB. 13
	SUDBURY	7	1	79	JUNE 12
	WINDSOR	9	1	53	JAN. 29
	HAPPY VALLEY	20	11	139	MAR. 23
1973	TORONTO	3	NIL	43	OCT. 24
	HAMILTON	2	NIL	34	FEB. 14
	SUDBURY	NIL	NIL	26	MAR. 14
	WINDSOR	7	NIL	44	FEB. 19
	HAPPY VALLEY	19	10	94	AUG. 21
1974	TORONTO	3	1	50	OCT. 29
	HAMILTON	11	NIL	44	OCT. 29
	SUDBURY	1	NIL	32	JULY 13
	WINDSOR	2	NIL	41	JAN. 7
	HAPPY VALLEY	24	13	116	APR. 23
	WELLAND	46	15	77	OCT. 6
	NIAGARA FALLS	NIL	NIL	20	NOV. 9
1975	TORONTO	2	1	62	NOV. 20
	HAMILTON	10	NIL	38	OCT. 24
	SUDBURY	NIL	NIL	30	FEB. 1
	WINDSOR	NIL	NIL	28	FEB. 11
	WELLAND	NIL	NIL	23	JAN. 24
	NIAGARA FALLS	NIL	NIL	21	NOV. 24
	CONISTON	NIL	NIL	30	MAY 13
1976	TORONTO	1	NIL	33	OCT. 3
	HAMILTON	8	NIL	41	DEC. 16
	SUDBURY	NIL	NIL	28	JUNE 6
	WINDSOR	1	NIL	34	DEC. 16
	WELLAND	NIL	NIL	24	DEC. 16
	NIAGARA FALLS	NIL	NIL	25	FEB. 21
	CONISTON	NIL	NIL	29	SEPT. 16
	NEW SUDBURY	NIL	NIL	29	APR. 2, 3 & JUNE 20
1977	TORONTO	4	NIL	36	JAN. 15
	HAMILTON	10	NIL	44	MAR. 12
	SUDBURY	NIL	NIL	24	JUNE 11
	WINDSOR (12008)	1	NIL	33	APR. 19
	WELLAND	NIL	NIL	22	JAN. 24, 25
	NIAGARA FALLS	NIL	NIL	28	FEB. 21
	CONISTON	NIL	NIL	25	APR. 25
	WINDSOR (12016)	NIL	NIL	29	APR. 19
	NEW SUDBURY	1	NIL	39	JUNE 11
	SARNIA	NIL	NIL	15	DEC. 13
1978	TORONTO	2	NIL	45	NOV. 5
	HAMILTON	7	NIL	43	NOV. 4
	SUDBURY	NIL	NIL	31	JAN. 22
	WINDSOR (12008)	1	NIL	33	APR. 19
	WELLAND	NIL	NIL	24	MAR. 15
	NIAGARA FALLS	NIL	NIL	23	NOV. 4, MAR. 11
	CONISTON	3	NIL	34	FEB. 7
	WINDSOR (12016)	NIL	NIL	28	FEB. 18
	NEW SUDBURY	1	NIL	42	FEB. 2
	SARNIA	3	NIL	41	JAN. 24
1979	TORONTO	2	NIL	35	OCT. 18
	HAMILTON	23	1	55	DEC. 22
	SUDBURY	NIL	NIL	18	JULY 7
	WINDSOR (12008)	NIL	NIL	31	FEB. 20
	NIAGARA FALLS	NIL	NIL	27	FEB. 21
	CONISTON	NIL	NIL	31	FEB. 14
	WINDSOR (12016)	NIL	NIL	27	FEB. 21
	NEW SUDBURY	NIL	NIL	28	FEB. 14
	SARNIA	2	NIL	43	FEB. 20
	ST. CATHARINES	NIL	NIL	29	NOV. 6

Table 14/1980 – Continued . . .

YEAR	CITY	NUMBER OF OCCASIONS		MAXIMUM INDEX	DATE OF MAXIMUM
		≥ 32	≥ 50		
1980	TORONTO	NIL	NIL	31	DEC. 8
	HAMILTON	4	NIL	40	OCT. 16
	SUDBURY	NIL	NIL	23	OCT. 16
	WINDSOR (12008)	NIL	NIL	25	FEB. 8, 9
	WINDSOR (12016)	NIL	NIL	25	DEC. 29
	NIAGARA FALLS	NIL	NIL	18	MAY 24
	CONISTON	NIL	NIL	30	FEB. 10, MAR. 9
	NEW SUDBURY	NIL	NIL	24	JULY 3, OCT. 16
	SARNIA	1	NIL	39	MAR. 20
	ST. CATHARINES	NIL	NIL	28	FEB. 20

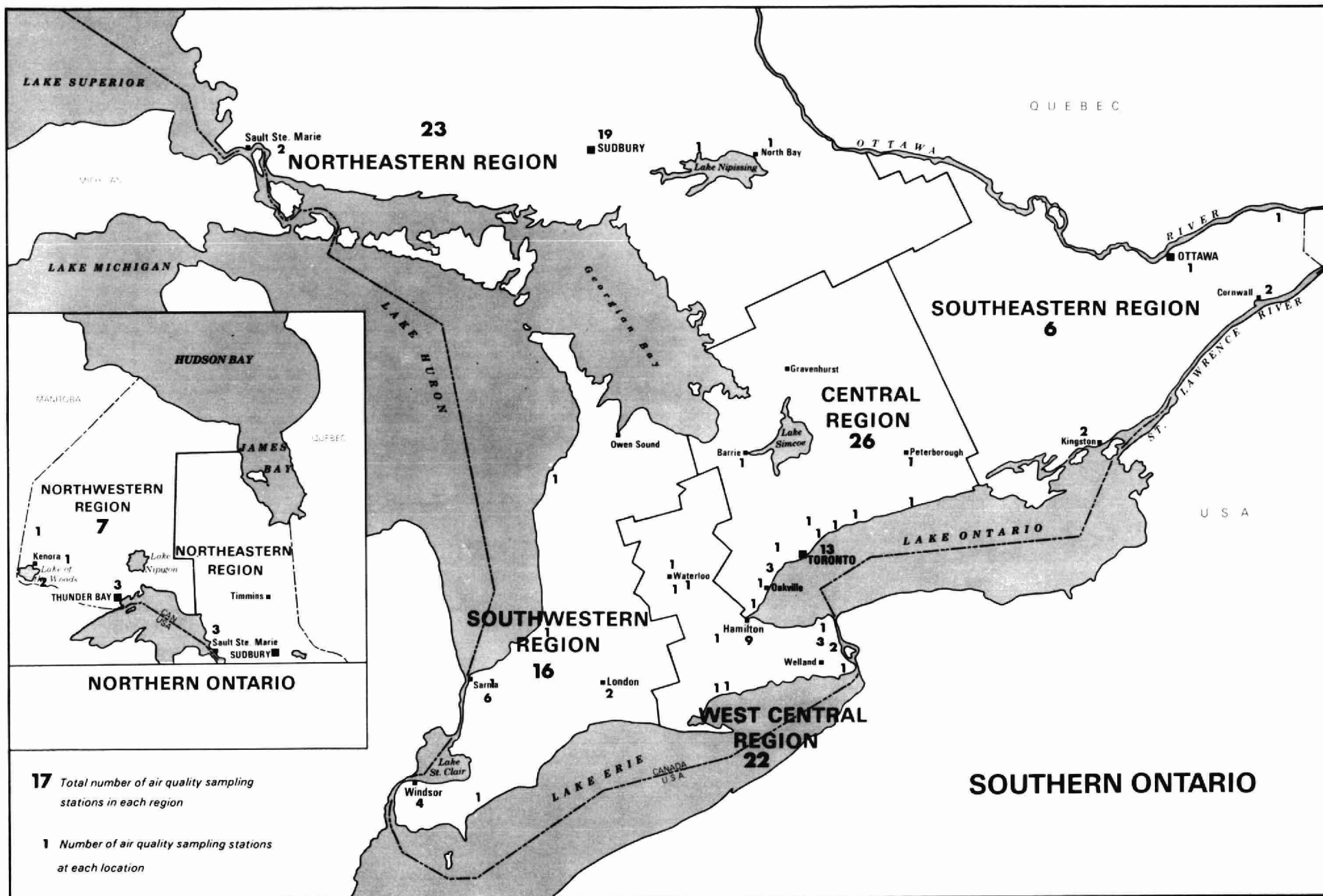


Figure 1. Locations of sampling stations in Ontario.

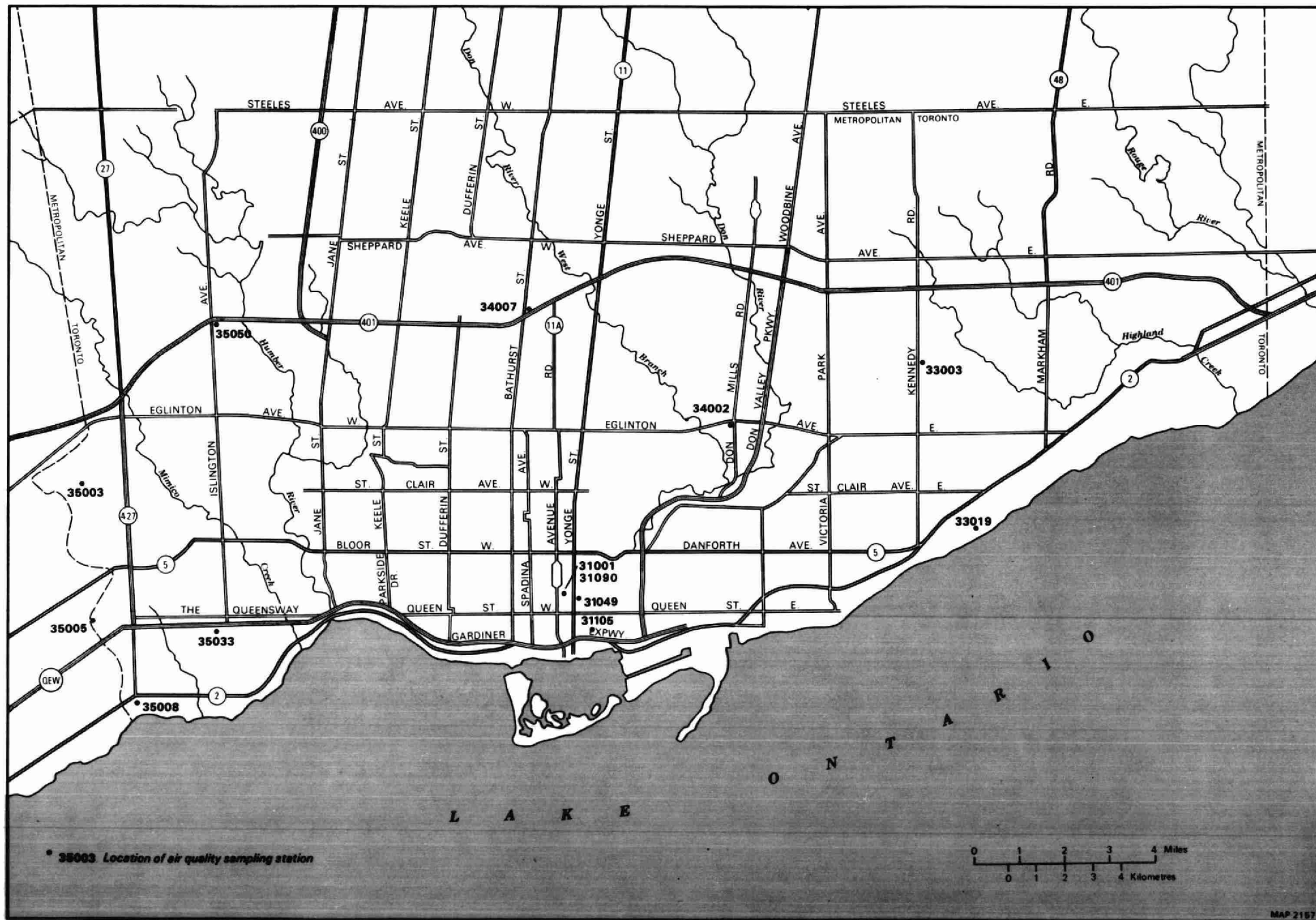


Figure 2. Locations of sampling stations in Metropolitan Toronto.

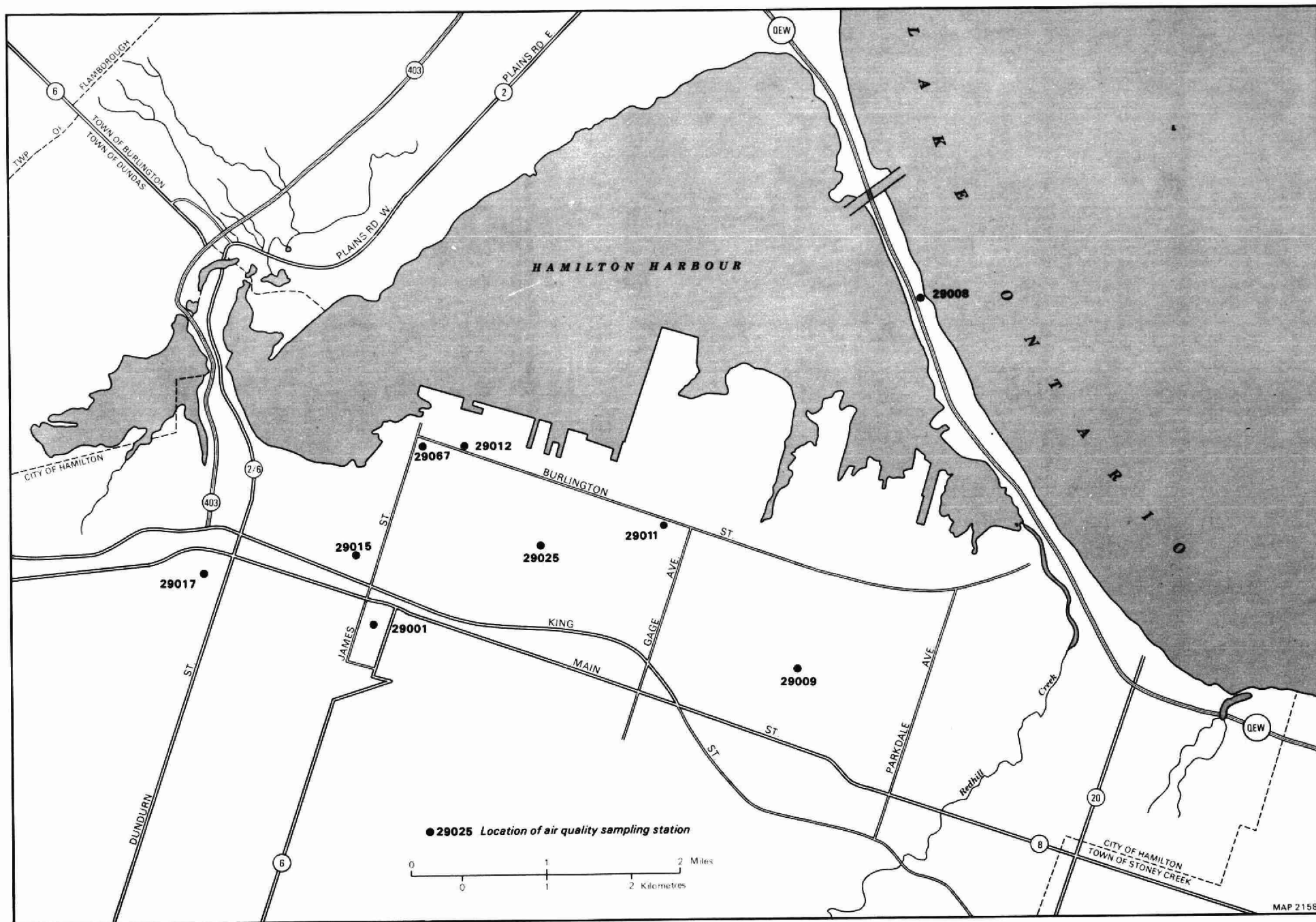


Figure 3. Locations of sampling stations in Hamilton.

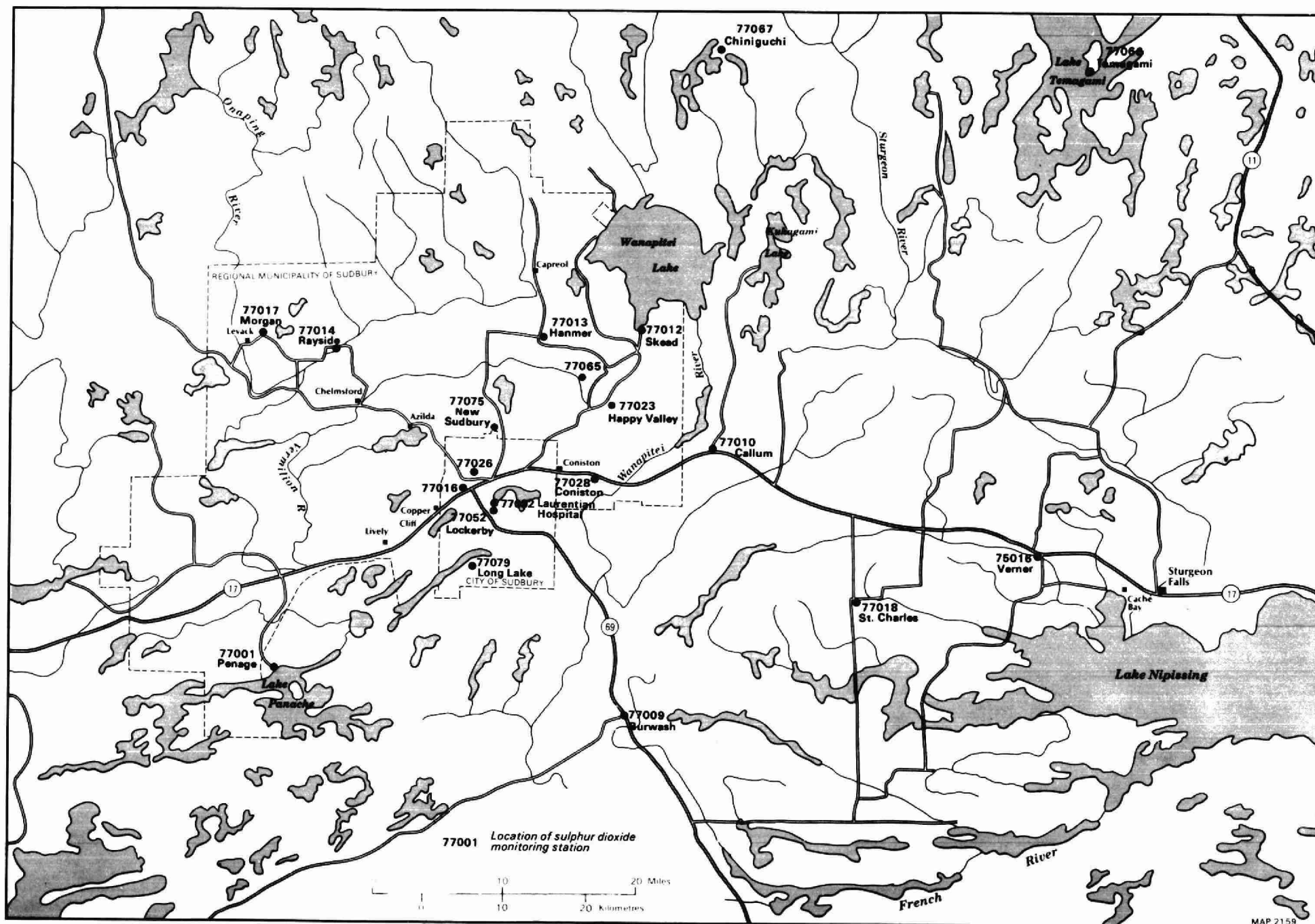


Figure 4. Locations of sulphur dioxide monitoring stations in the Sudbury area.

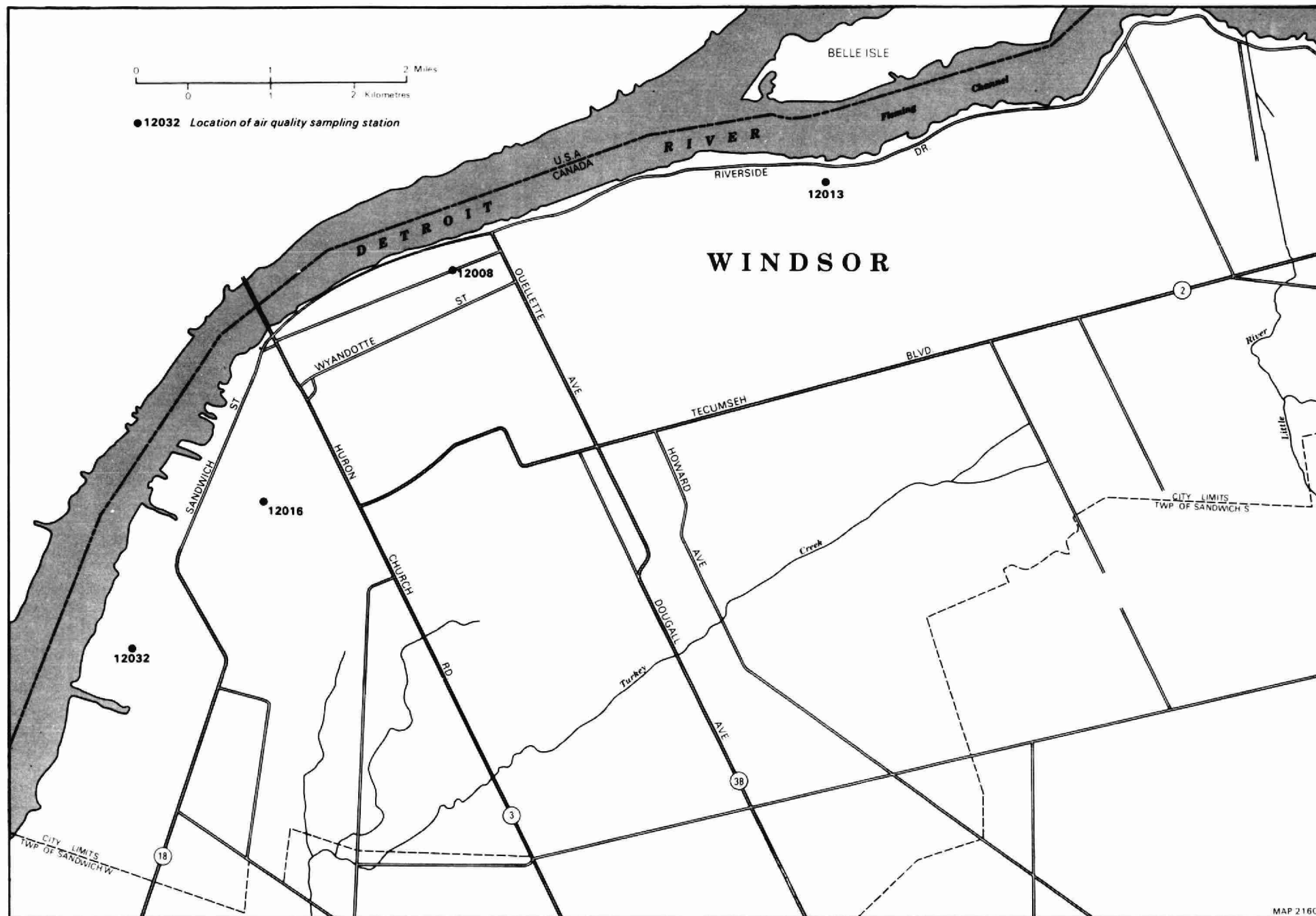


Figure 5. Locations of sampling stations in Windsor.

LEGISLATIVE LIBRARY OF ONTARIO



9693600020208